

YOUTH SOLUTIONS REPORT

First Edition



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The views expressed in this report do not reflect the views of any organization, agency or programme of the United Nations. The report has been prepared by the Solutions Initiatives team of SDSN Youth. Lead writers are Dario Piselli, Michelle Huang, Kanika Joshi, Dominique Maingot and Michela Magni. Chapter 3 contains material presented by the applicants who have responded to the report's call for submissions. Chapter 4 and 5 contain contributions of SDSN Youth Global Coordinator Siamak Loni and the Barilla Center for Food and Nutrition.

This report has been prepared with the consultation of Members of the SDSN Leadership Council and representatives of external organizations, including the UN Office of the Youth Envoy, Ashoka, Sustainia, The Resolution Project, and PANORAMA (managed by IUCN and GIZ). Notwithstanding the different forms of collaboration that SDSN Youth entertains with these organizations, the individuals that have participated in the Report serve in their personal capacities, so the opinions expressed here may not reflect the opinions of their host institutions. Members of SDSN Leadership Council and representatives of external organizations are not necessarily in agreement with every detail of this Report.

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SDSN Youth is an initiative of the UN Sustainable Development Solutions Network; a program launched by UN Secretary General, Ban Ki-moon, in 2012 to mobilise global expertise around the Sustainable Development Goals (SDGs).



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FOREWORD



To say that I am proud of SDSN Youth for producing the Youth Solutions Report would be an extreme understatement. To say that I am impressed and gratified by the solutions described in the report would similarly be an injustice of understatement. This new report is nothing less than the most compelling proof to date that the SDGs can mobilize the world's youth to chart a new course for smart, fair, and sustainable globalization. I say Hooray!

The purpose of the report is well described in the Preface:

By launching the Youth Solutions Report, we aim to give further voice to young leaders and innovators, by allowing them to communicate their undertakings, forge new partnerships and ultimately be the driving force behind the 2030 Agenda. Whether you are a policymaker, an impact investor, a philanthropist or a young individual yourself, I strongly encourage you to be part of this exciting initiative, not only by learning more about the 50 Solutions and Ideas that are included in the Report, but most importantly through your active support to youth solutions.

This is a special time for youth-led innovation. Not only do today's young people face unprecedented challenges, such as human-caused climate change, or the downsides of globalization, such as large-scale human trafficking, but they also possess more powerful tools to solve these problems as well, especially through the deployment of the new information technologies. And in this, today's youth are not only apprentices but leaders; the ICT revolution is also a youth revolution. I know. My three children are the indisputable ICT tech support for their boomer-generation mom and dad, and for most tech issues, the younger the child, the better the answer!

Thanks to the generosity of Ms. Betsee Parker and the world-changing and world-inspiring moral leadership of the *Pontifical Academy of Sciences* and the *Pontifical Academy of Social Sciences* and their Chancellor, Monsignor Marcelo Sanchez Sorondo, many of the solutions in this report were presented at the *Vatican Youth Symposium* at the Vatican on October 28-30. The symposium was a thrilling occasion: the energy, excitement, enthusiasm, and good will in the room was enough to meet the SDGs. And for good reason. The youth leaders that were presenting their projects have been putting their knowledge, passion, and long hours to work to turn their visions into realities.

The range of project is marvelous, ranging from youth mentoring to community SDG engagement to ecosystem protection to help for trafficked youth to new engineering solutions for neonatal survival. Consider for example *LifeCradle*, the winning project at the Vatican Youth Symposium. As inventor Malav Sanghavi describes his aim: "Though LifeCradle our objective is to provide basic facilities for the child's survival in the first few

critical days of its life and thus reducing World's Infant Mortality rate." Not bad for a youth project! And one has confidence that Malav is on to a real breakthrough.

The core goal of the SDSN Youth Solutions Report is to encourage young social entrepreneurs around the world to pursue the SDGs. We hope and trust that the Report will be both an inspiration and a guidebook, to help countless other inventors and entrepreneurs to organize their efforts, raise funding, mobilize partners, and test concepts. We expect that these young SDG activists, and SDSN Youth, will be the catalysts for a new and dynamic worldwide network of SDG entrepreneurs.

Of course, another specific and very important purpose is to give support to these young people. They have laid out their visions and their plans. They have pointed to their start-up financing needs, which are typically very modest in return the enormous benefits that are envisaged and described. I do very much hope and expect that this inspiring report will stimulate generous philanthropists, foundations, and businesses to reach out to these young entrepreneurs and to SDSN Youth, so that we can help these wonderful young people to realize their visions in advancing the Sustainable Development Goals.

Jeffrey Sachs

January 29, 2017

Director, UN Sustainable Development Solutions Network

PREFACE



When '*Transforming our World: the 2030 Agenda for Sustainable Development*' was agreed at the 70th Session of the United Nations General Assembly in September 2015, there was widespread agreement on the fact that the international community's progress towards a sustainable future should be a matter of utmost importance for all inhabitants of this planet, but particularly for younger generations.

Across the 17 Sustainable Development Goals and 169 related targets included in the Agenda, a close look at the available data (which is, unfortunately, often missing or incomplete) reveals the unique toll that poverty, war, lack of opportunities, social exclusion, climate change and environmental degradation are taking on young people worldwide.

The primary issue that comes to mind is, of course, unemployment. In 2016, the International Labour Organization estimated that the global unemployment rate for youth has reached 13.1 percent, three times the adult unemployment rate and affecting young women more than men in almost all regions of the world. In addition, it is especially worrying that up to two thirds of youth in developing economies are currently without work, not studying, or engaged in irregular or informal employment, thereby fueling the risk of social unrest and further affecting the likelihood of conflict and migration.

Aside from the direct threat of unemployment, however, there are multiple, equally important dimensions to the challenges faced by young people in the implementation of the 2030 Agenda. Notwithstanding vast improvements in education and health since the adoption of the Millennium Development Goals, for example, the number of children and adolescents who are not in school is on the rise, whilst more than 2.6 young people aged 10-24 continue to die each year, mostly due to preventable causes. Today, more than 600 million youth live in fragile and conflict-affected territories, and the number of young people forcibly displaced by conflicts and disasters has skyrocketed since it was last measured in 2011, when it was already high at 14 million. Access to financial and social assets and business development services, which are crucial to helping youth make their own economic decisions and get out of poverty, remains an arduous task, and environmental change now threatens to directly erode youth livelihoods or aggravate the impact of other factors, such as health and work opportunities, in many countries.

On the one hand, the 2030 Agenda emphasized the need to address some of these daunting challenges, including unemployment, access to education and health care, and general lack of opportunities for the full realization of young people's rights and capabilities. Moreover, it identified children and young women and men as critical agents for change, and lauded their 'infinite capacities for activism in the creation of a better world'.

Yet, when describing the situation facing young people, who currently comprise one fourth of the global population, one aspect continues to be largely overlooked: the incredible potential of mobilizing and supporting their active contribution, rather than just discussing about their needs and problems. Young people not only have a stake because they will be the ones implementing the Sustainable Development Goals and because their well-being will depend on achieving them, but

also (and especially) because they are part of the most educated generation in the history of the world, and through their skills, creativity, and enthusiasm they are uniquely positioned to deliver transformative change across multiple sectors of society.

Globally, it has been estimated that young people are 1.6 times more likely than older adults to become entrepreneurs, have higher literacy rates, and are more networked than the global population as a whole. In fact, in the world's least developed countries, young people are nearly three times more likely than the general population to be using the internet.

In other words, ranging from entrepreneurship to volunteering, scientific research, educational initiatives and all sorts of innovative endeavours, young people are already playing a major role in pushing our countries towards sustainable development. In the words of the former President of the United Nations Economic and Social Council, Martin Sajdik,

“The energy that helped us take the Millennium Development Goals from New York into local communities in countries around the world was to a large extent driven by the passion of youth-led organizations and their members [...], and young people, once again, can be called upon to transform the SDGs from words in a document into a real and tangible guide for the next fifteen years that will determine the future of people and the planet.”

This is why, now more than ever, the efforts of young people should be celebrated and showcased at all relevant levels. This is also why we believe it is crucial to bridge the gap that still exists between youth-led solutions and those stakeholders, including businesses, governments, and fellow citizens, who could further empower, support and invest in them, once they know more about the incredible impact that youth are having across their communities and regions.

By launching the Youth Solutions Report, we aim to give further voice to young leaders and innovators, by allowing them to communicate their undertakings, forge new partnerships and ultimately be the driving force behind the 2030 Agenda. Whether you are a policymaker, an impact investor, a philanthropist or a young individual yourself, I strongly encourage you to be part of this exciting initiative, not only by learning more about the 50 Solutions and Ideas that are included in the Report, but most importantly through your active support to youth solutions.

In 2017, SDSN Youth will use the Youth Solutions Report as the first step of a comprehensive, long-term strategy that will allow young change-makers to have access to multiple opportunities for funding, technical assistance, mentoring, and networking. We look forward to engaging with existing and new partners on joint events, actions and programs that create these opportunities, and to do that we need the widest possible support at all relevant levels.

Let's make sure that the untapped potential of youth is finally mobilized to meet the challenge of sustainable development.

Dario Piselli
Project Leader for Solutions Initiatives, SDSN Youth
Editor-in-chief of the Youth Solutions Report



STATEMENTS OF SUPPORT

"Today we have the largest generation of youth in history - a powerful force for change. 84 percent of millennials are convinced they have a duty to make the world a better place, and many already are, through socially aware businesses and youth-led campaigns in support of the Sustainable Development Goals. SDSN Youth and its Youth Solutions Report are excellent examples of initiatives crucial for helping young people realize the full potential of their abilities, innovations and solutions."

Paul Polman, CEO, Unilever

"Sustainia strongly supports SDSN Youth in their efforts to celebrate and disseminate youth-driven solutions that address some of the most pressing challenges we currently face. The Sustainable Development Goals represent the finish line in terms of what we want to achieve by 2030, but in order to achieve those ambitious goals we need innovative solutions from a new generation of change makers. At Sustainia we are happy to partner with SDSN Youth to spread awareness about the many young sustainability pioneers out there and support them in their efforts to connect to the right people in order to advance and scale their solutions."

Morten Nielsen, COO, Sustainia

"Working in an integrated manner to address global challenges is essential for achieving the SDGs. The youth of today, as the change-makers of tomorrow, have understood this necessity more than any generation before them. They also have a key role to play in pioneering such integrated solutions. The solutions we promote through PANORAMA, an initiative led by IUCN and GIZ, also take such an integrated approach – looking at nature conservation and human development as two sides of the same coin. It's been an honour to support the selection process of the first SDSN Youth Solutions Report. I was impressed by the diversity of the solutions, and the "hands-on" attitude through which many of them developed creative responses to very concrete on-the-ground challenges."

Marie Fischborn, PANORAMA coordinator, IUCN

"The competition launched by SDSN Youth has resulted in a treasure trove of solutions and ideas. Winning proposals can be piloted, harnessed for lessons, and taken to scale. Proposals considered, even those not selected, have contributed to broadening the understanding of the wide variety of challenges being tackled by various stakeholders across the globe. It was a great learning experience to participate in the screening process of the Youth Solutions Report."

Frannie Leautier, Senior Vice President, African Development Bank

"Many development challenges are shared by different countries and it is pleasing to see that many of the Youth Solutions projects cross national borders. The Youth Solutions selected for this Report highlight the importance of young people sharing experiences and learning from other young people. They also highlight that all generations have a lot to learn from young people. It is one thing to have an idea but the young people behind these projects have demonstrated the entrepreneurialism needed to translate good ideas into practical initiatives. I was inspired by these projects and I am sure that many others around the world will be also."

John Thwaites, Chair, ClimateWorks Australia and Monash Sustainability Institute

"The Resolution Project is committed to supporting youth leadership through the work of our Fellows in their innovative social ventures. Resolution Fellows are undergraduate social entrepreneurs who have founded 160 social ventures that are combating global challenges in over 65 countries. The work that the Sustainable Development Solutions Network and SDSN Youth have done to identify creative and impactful social entrepreneurs – including many Resolution Fellows – in their Youth Solutions Report is impressive and important. These inspiring ventures serve as a beacon for young socially-responsible leaders around the world to aspire to and emulate. Resolution is thrilled to collaborate with SDSN Youth as we work to empower socially responsible youth to make an impact in communities around the world."

Oliver Libby, Chair and Co-Founder, The Resolution Project

"In a world that is defined by accelerating change, complexity and hyper-connectivity, young people must be equipped and inclined to live for the common good. The Youth Solutions Report sets out great examples of exceptional young people who are doing just that. Ashoka is delighted to be working with SDSN Youth to inspire young people to follow suit and to help young Change Leaders build new ecosystems that empower every young person to create a better world."

Ross Hall, Director of Education, Ashoka

"The Sustainable Development Goals promise a dignified lifestyle for all present and future generations sharing our planet Earth. While we have only 14 years to achieve these ambitious goals, the commitment and ideas of creative younger people, as can be seen in this Youth Solutions Report, is encouraging and inspiring. Warm congratulations to the SDSN for this important initiative, and to the young innovators involved in the 50 solutions which demonstrate the cross-cutting and global nature of our ambitions."

Julia Marton-Lefevre, Chair of the Advisory Board of the Sustainable Biomass Partnership and Former Director-General of IUCN

"I am delighted to have been involved in this important initiative. Attainment of the the SDGs will only be achieved with the active engagement and involvement of all generations of society and most important amongst these will be those with the greatest interest - the Youth of the World. This report identifies and highlights a series of initiatives, both Solutions and Ideas, that are replicable, scaleable or both. I urge youth from around the world to take inspiration and courage from the leaders who have developed these initiatives to get involved and bring their energy and innovation to make a difference, to secure their future and that of generations to come."

Malcolm Preston, Global Sustainability Leader, PricewaterhouseCoopers

THE ADVISORY PANEL

For the selection of the Solutions that are included in the Report, SDSN Youth has appointed an Advisory Panel of 14 high-level individuals, comprising world-renowned experts from different disciplines, representatives of the SDSN Secretariat and members of SDSN Youth Executive. The following individuals took part in the review of submissions and are currently advising SDSN Youth on the Report's dissemination and exploitation.



AHMAD ALHENDAWI

Ahmad Alhendawi is the United Nations Secretary-General's Envoy on Youth. Mr. Alhendawi assumed his position on 17 January 2013 with a mandate to harmonize the UN system efforts on youth development, enhance the UN response to youth needs, advocate for addressing the development needs and rights of young people, as well as to bring the work of the United Nations with and for youth closer to them. The Envoy on Youth also acts as the advisor to and the representative of the Secretary-General on youth related matters.



JULIA MARTON-LEFÈVRE

Julia Marton-Lefèvre was the Director General of IUCN (International Union for Conservation of Nature) until January 2015. IUCN is the world's largest conservation/ environment membership organisation, bringing together a unique worldwide partnership of states, government agencies, non-governmental organisations, scientists and experts. As Director General she was also CEO of IUCN's Secretariat of over 1000 persons with offices in some 50 countries. In her efforts to bridge the gap between business and civil society, J. Marton-Lefèvre has served on the environmental advisory boards of the Dow Chemical Company the Coca Cola Company, Nespresso and on the board of the UN Global Compact. She is presently chairs the Advisory Board to the Sustainable Biomass Partnership, and is on committees advising Veolia and BNP Parisbas.



CHERIE NURSALIM

Cherie Nursalim is Vice Chairman of GITI Group, a Member of the International Advisory Board of Columbia University and the Asia Advisory Board of the MIT Sloan School of Management. She also sits on the boards of the Yale Center for Environmental Law Policy and the University of Indonesia Climate Change Center, as well as the China Disabled Persons Foundation Board and the United in Diversity Foundation. Ms. Nursalim has recently been appointed to the Executive Board of International Chamber of Commerce. She is a frequent organizer of international and education forums and has won the Baiyulan Award from the Shanghai government and was listed among the 48 Heroes of Philanthropy by Forbes.



JOHAN ROCKSTRÖM

Johan Rockström is the executive director of Stockholm Resilience Centre. He is a Professor in Environmental Science with emphasis on water resources and global Sustainability at Stockholm University. Rockström is an internationally recognized scientist on global sustainability issues, where he, e.g., led the recent development of the new Planetary Boundaries framework for human development in the current era of rapid global change. He is a leading scientist on global water resources, and strategies to build resilience in water scarce regions of the world, with more than 15 years experience from applied water research in tropical regions, and more than 100 research publications in fields ranging from applied land and water management to global sustainability.



ROSS HALL

Ross is currently directing Ashoka's education strategy for triggering a fundamental change in the experience of education so that every young person is empowered to make a better world. He is a Board Director of Whole Education - a network of schools committed to providing holistic education - and a founding trustee of a new all-through schools chain in the UK. Ross researched and designed a ground-breaking programme that aims to equip and incline young people to be well and to do well. The first implementation of the Better World Programme is with 500,000 children in rural communities across Zimbabwe and Tanzania.



FRANNIE LÉAUTIER

Dr. Frannie Léautier is Senior Vice President of the African Development Bank. Dr. Léautier previously served as Chairperson and Co-Founding Partner of Mkoba Private Equity Fund and Executive Secretary of the African Capacity Building Foundation (ACBF). A Tanzanian national, she served as Vice President of the World Bank and Head of the World Bank Institute from December 2001 to March 2007. She also served as Chief of Staff to the former President of the World Bank from 2000 to 2001. Cumulatively, Dr. Léautier served in various capacities at the World Bank from 1992 to 2007. From 2007 to 2009, she was a Managing Partner at The Fezembat Group, a company focused on risk management and leadership development.



MARIE FISCHBORN

Marie Fischborn is with the International Union for Conservation of Nature (IUCN). She currently leads IUCN's engagement in the PANORAMA initiative, with a thematic focus on protected area solutions, working globally with a wide range of partners and stakeholders. Marie has also played a leading role in the emergence of PANORAMA. PANORAMA is a partnership initiative to identify and promote examples of inspiring, replicable solutions across a range of conservation and development topics. Marie holds a master's degree in Biodiversity and Ecology and a bachelor degree in Biology.



MALCOLM PRESTON

Malcolm Preston is a Chartered Accountant and is Global Head of Sustainability Services at PricewaterhouseCoopers, leading a global team of some 700 sustainability and climate change experts, with over 100 based in the UK. Malcolm specialises in the measurement and valuation of environmental, social and economic impacts. He leads PwC's Total Impact Measurement and Management (TIMM) team, delivering projects for a number of large Fortune 100 corporates. He also leads PwC's thought leadership on the implementation of the Sustainable Development Goals and, in particular the role of the private sector in their achievement. He is actively engaged with several UN agencies and is responsible for the development of PwC's bespoke tool, the SDG Business Navigator.



MORTEN NIELSEN

Morten Nielsen, M.Sc. is a business executive with more than 15 years experience from international organizations. He is currently the Managing Director at Sustainia. Sustainia helps public and private organizations create a more sustainable tomorrow, building on the solutions available today. As a world leader in navigating the new market opportunities for the Sustainable Development Goals and with an extensive, global database of cutting-edge innovations, Sustainia's mission is to innovate the business models of the future.

**OLIVER LIBBY**

Oliver B. Libby is the Chair & Co-Founder of The Resolution Project. Resolution identifies and empowers undergraduate students around the world who wish to launch new social ventures, supported by Resolution's global network of resources. Oliver is also a founding Managing Director of Hatzimemos / Libby, a global growth catalyst firm based in New York, focusing on the energy and advanced technology sectors. Oliver serves as a Trustee of the philanthropic Harvard Club of New York Foundation and a member of the Clinton Global Initiative's LEAD program. Oliver graduated magna cum laude from Harvard University.

**JOHN THWAITES**

John Thwaites is a Professorial Fellow, Monash University, and Chair of ClimateWorks Australia and the Monash Sustainability Institute. John is a Co-Chair of the Leadership Council of the UN Sustainable Development Solutions Network (SDSN) launched by the Secretary General of the UN to provide expert advice and support to the development of the 2030 Sustainable Development Agenda and the Sustainable Development Goals. He was Deputy Premier of Victoria from 1999 until his retirement in 2007. During this period he was Minister for Health, Minister for Planning, Minister for Environment, Minister for Water, Minister for Victorian Communities and Victoria's first Minister for Climate Change. In these portfolios he was responsible for major reforms in social policy, health, environment and water.

**VIRGILIO VIANA**

Virgilio Viana is an expert in forestry and sustainable development. He received a PhD in evolutionary biology from Harvard University and did post-doctoral work on sustainable development at the University of Florida. He was formerly professor of forest sciences at the Higher School of Agriculture Luiz de Queiroz, at São Paulo University. Dr. Viana coordinated the Brazilian consultative process that led to the establishment of the Forest Stewardship Council (FSC) in 1993. In 2008, Dr. Viana transitioned to a new role as Director General of the Amazonas Sustainable Foundation (FAS), an organization charged with implementing the Bolsa Floresta Program, as well as providing the institutional framework to market environmental services of Amazonas' forests.

**LAUREN BARREDO**

Lauren Barredo is the Head of Partnerships for the SDSN, where she manages relationships with institutions, companies, and individuals, and finds new ways to collaborate on SDG implementation. In addition, she manages three Thematic Networks (Health, Agriculture, and Extractive and Land Resources) as well as three Regional Networks (Amazon, Australia Pacific, and Caribbean). Previously she was a Special Assistant to Jeffrey D. Sachs at The Earth Institute, Columbia University. Prior to that Lauren worked as a project administrator for the National Fish and Wildlife Foundation. She holds a Masters Degree in Environmental Management from the Yale School of Forestry and Environmental Studies, and two Bachelors Degrees from American University.

**DARIO PISELLI**

Dario Piselli is the Project Leader for Solutions Initiatives of SDSN Youth. He is currently a PhD Student in International Law at the Graduate Institute of International and Development Studies and a Research officer at the Global Health Centre. Dario holds an MSc in Environment and Development from the London School of Economics and Political Science and a Master's Degree in Law from the University of Siena. With SDSN Youth, he coordinated the #KnowYourGoals global campaign and currently serves as its representative in the Global Partnership for Sustainable Development Data, as well as in the steering committee of the SDG Youth Action Mapper initiative. Dario is based in Geneva, Switzerland.

Chapter 1

OVERVIEW OF THE REPORT



1. INTRODUCTION

This first edition of the Youth Solutions Report bears the fruits of a year-long process in which the Sustainable Development Solutions Network - Youth (SDSN Youth) and its partners sourced youth-led solutions across all countries and regions to showcase the innovative approach that young people are taking in achieving the Sustainable Development Goals (SDGs). The Report builds upon one of three key pillars of the activity of SDSN Youth¹, which mandates an operational focus on “supporting young people in the creation and scaling of innovative solutions for the SDGs”.

The yearly Youth Solutions Report is envisaged as the first step in a long-term process through which SDSN Youth, in collaboration with the Sustainable Development Solutions Network (SDSN) at large, will aim at directly supporting youth-led projects through funding, expertise, and visibility. In this context, the dissemination and exploitation strategies which will characterize the follow-up to its release will be as important as the Report itself, and will be carried out at the international, national, and local level through a series of online and offline activities including conferences and events, webinars, a dedicated investment readiness programme, and a platform for investors and supporters.

SDSN Youth remains committed to working with partners at all relevant levels, including UN agencies, governments, universities, NGOs and the private sector to overcome the challenges that youth are facing in developing their solutions, establishing young people not only as a key demographics in the implementation of the 2030 Agenda for Sustainable Development, but also as a main contributor to its success.

2. THE ISSUE

Today, there are roughly 1.8 billion people aged 10 to 24 in the world.² In total, young people under 30 years old account for almost half of the global population. As reaffirmed by Resolution 70/1 of the UN General Assembly,³ harnessing their active contribution in the implementation of the 17 SDGs and 169 related targets is widely argued to be critical for the ultimate success of the 2030 Agenda. In particular, young people's participation in the economic, political and community life of their countries can have profound consequences on development and social inclusion within society at large. It has been observed that young people display a level of early stage entrepreneurial intention and start-up activity up to 1.6 times that of adults.⁴ The International Telecommunications Union (ITU) now estimates that youth worldwide is nearly two times more networked than the global

¹ SDSN Youth. Our Mission [online]. Retrieved from <<http://sdsnyouth.org/about/#our-mission>> accessed 25 January 2017.

² UNFPA (2016). *The State of the World's Population 2016*. New York: United Nations Population Fund, p. 105.. Retrieved from <https://www.unfpa.org/sites/default/files/pub-pdf/The_State_of_World_Population_2016_-_English.pdf> accessed 25 January 2017.

³ UN General Assembly Resolution 70/1, *Transforming Our World: The 2030 Agenda for Sustainable Development*, A/RES/70/1 (25 September 2015), available from undocs.org/A/RES/70/1.

⁴ Global Entrepreneurship Monitor (2015). *2014 Global Report*. London: Global Entrepreneurship Research Association.

population as a whole.⁵ At the same time, in 2013 the youth literacy rate at the global level has been measured at 91 percent, compared to an adult literacy rate of 85 percent, and intelligence tests have been rising for decades in many countries.⁶

However, when we talk about the role of young people in achieving the SDGs, we often forget that they are not simply there to be creative and mobilize support. As demonstrated by the references above, they are also incredibly skilled, and many of them are already contributing to the 2030 Agenda through their actions and undertakings in educational programs, charity initiatives, research, and enterprise. In pursuing their objectives, these young people face common challenges, including reduced visibility, limited access to funding, and lack of sufficient advice or technical support.

As such, it is extremely important to recognize and celebrate solutions led by young people around the SDGs in order to provide them with a solid network of supporters willing to promote their projects and initiatives. The Youth Solutions Report aims to identify such youth-led projects and ground-breaking ideas that are successfully working towards achieving the targets set in the 2030 Agenda by presenting them at international conferences and events, promoting them through all relevant means and helping them gain access to interested investors, donors and partners.

3. WHAT IS A YOUTH-LED SOLUTION?

Youth-led solutions are transformative projects and endeavours, ranging from entrepreneurial ventures to educational programs, and include research activities, charity initiatives and so forth, that showcase the innovative approach that youth are taking in solving the multiple challenges of sustainable development. For the purpose of this Report, these youth-led projects have actually been grouped according to two categories, in order to facilitate submissions: **Solutions** and **Ideas**. Solutions are readily available projects in their implementation phase which have been operating for at least 18 months. These have often overcome initial barriers to become self-sustainable and financially viable, and are positively contributing to the achievement of one or more of the SDGs. On the other hand, Ideas are projects which are currently in their design phase and/or projects which have not been operating for at least 18 months. These would include new startups which nonetheless demonstrate a sustainable business model.

In order for a Solution or an Idea to be included in the Report, nine eligibility criteria were developed. As discussed below in Section 4.2, these criteria were also used by the Advisory Panel of the Youth Solutions Report for assessing the applications that were received.

- **Alignment to one (or more) of the 17 SDGs:** projects must be linked to one or more of the SDGs in order to qualify. For instance, if a project is working on women's empowerment in rural

⁵ ITU (2013), *Measuring the Information Society 2013*. Geneva: International Telecommunications Union, p.50. Retrieved from <http://www.itu.int/en/ITU-D/Statistics/Documents/publications/mis2013/MIS2013_without_Annex_4.pdf> accessed 25 January 2017.

⁶ United Nations (2015). *The Millennium Development Goals Report 2015*. New York: United Nations, p.24. Available at <[http://www.un.org/millenniumgoals/2015_MDG_Report/pdf/MDG%202015%20rev%20\(July%201\).pdf](http://www.un.org/millenniumgoals/2015_MDG_Report/pdf/MDG%202015%20rev%20(July%201).pdf)> accessed 25 January 2017.

areas of Kenya, it is most closely aligned with SDG 5 ("Achieve gender equality and empower all women and girls") and as such, it fits this criterion.

- **Youth-led and illustrative of youth contribution to sustainable development:** the projects must have been founded by a person aged 15-30 and they must showcase the skills and creative mindset of the proponent(s). SDSN Youth has not simply looked at successful endeavors. Through the Youth Solutions Report it has specifically tried to celebrate innovative, game-changing ideas which have the potential to build transformative change and shift the behavior of people, businesses and countries.
- **Target audience, objectives and structure:** projects should have a well-structured time horizon, identified key stakeholders and beneficiaries, and proposed outcomes that are reasonable and well thought out.
- **Availability (for Solutions only):** projects must be readily available, in its implementation phase and must have been operating for at least 18 months to overcome initial barriers related to project administration and future viability.
- **Environmental impact:** to be eligible, projects must have a positive environmental impact, bringing innovations which are capable of reducing carbon emissions, developing sustainable consumption and production patterns, reducing the loss of terrestrial or aquatic biodiversity, or more generally respecting the earth's planetary boundaries. Of course, not all projects will have a direct positive impact on the environment. It is necessary, however, that projects do not have an adverse effect on the environment.
- **Social impact:** to be eligible, projects must have a positive social impact, for example generating employment, eradicating poverty, or developing skills. Any improvement to quality of life at community level, through an international reach or by any interaction with youth is considered in this parameter. In addition, projects must aim to be inclusive and not to exacerbate existing inequalities.
- **Impact measurement:** the impacts of projects must have been adequately measured and/or be measurable, and if possible should be aligned with the SDG indicator framework which is being developed to monitor the implementation of the 2030 Agenda. For example, if a business has found an inspiring and innovative way to achieve the sustainable management and efficient use of natural resources in its operations, then chances are that it is not only aiming to meet Goal 12 ('Ensure Sustainable Consumption and Production Patterns') and target 12.2, but that it has also introduced a way to measure this impact, Impact measurement, even if not directly aligned with the SDG indicator framework, is key to demonstrate the success of Solutions and communicate it to others.
- **Financial viability:** Solution must also be self-sustaining in the long term. In other words, they must be able to achieve efficiency and to survive on their own through the resources they generate and/or the investments and donations they attract.
- **Scalability:** projects must have the potential to perform as well or better after expanding in scope or size and/or being transported to other regions. The Youth Solutions Report looks at projects which might help other people in other parts of the world, beyond their immediate community.

4. THE PROCESS OF SUBMISSION AND REVIEW

4.1. Call for submissions

The call for submissions to the first edition of the Youth Solutions Report was launched in July 2016. The initial pool of Solutions and Ideas has been developed based on: (a) SDSN Youth's outreach efforts to youth groups and communities; (b) SDSN Youth's cooperation with SDSN Regional and National Networks, SDSN Youth's Member Organizations, and other external partners; and (c) nominations and direct submissions through the Report's website. The following submission form was used to receive and review submissions:

SOLUTION/IDEA [Provide a name]	
Founders	<ul style="list-style-type: none"> Mention the name(s) and position(s). Include all affiliations including funding agencies, technology partners, knowledge partners, private players, content partners, etc. Include the age as it comes under the eligibility criteria. Please mention the email address and telephone contact details of each founder.
Location	<ul style="list-style-type: none"> Please select all the locations relevant to the project. This should include the macro-region where the project is taking place (e.g., South Asia, Mediterranean, Sub-saharan Africa) as well as all places of operation.
Status	<ul style="list-style-type: none"> Mention the year of foundation. Select organization type among student organization, volunteer association or group, entrepreneurial endeavour/startup, educational and/or non-profit. Please select a legal status from the drop down, if applicable (relevant year, country of registration, registration no.) registered non-profit/NGO/charity (e.g., 501(c) tax-exempt non-profit, USA; Registered Charity No., England & Wales, ABN no., Australia, CRA no, Canada etc.) Registered company limited by guarantee (no.) Other If not registered: any plans to do so, any steps taken, N/A etc.
Background	<ul style="list-style-type: none"> Please describe your Solution/Idea by mentioning how it was formed, in which context, what are its key components and activities, etc. Mention what is the addressed need/issue, why was it addressed and in what region. This section should reflect on how the project progressed from the Idea stage. Please describe the beneficiaries of the particular project and its scale along with any potential opportunity for growth or expansion. Please mention the partnership/s developed to implement the project.
Funding	<ul style="list-style-type: none"> Give details about how the project receives its funding. Select an appropriate budget from the drop-down list.
SDGs	<ul style="list-style-type: none"> Please check all that apply among the 17 SDGs. Click here for a full list of the SDGs and targets.
Results	<ul style="list-style-type: none"> Describe the results the project has achieved to date. Also include a brief about how results have been measured or evaluated.
More information	<ul style="list-style-type: none"> Please include relevant links to website, news or pictures to enhance the form.

The window for submissions was extended once to 15 October 2016. A pre-launch event was then held on 15 November 2016 at the *22nd Conference of the Parties to the UN Framework Convention on Climate Change* in Marrakech during the Low Emissions Solutions Conference 22

(LESC22).⁷ The event was aimed at discussing solutions submitted by the participants around SDGs 7 and 13 and announcing the January 2017 launch of the Report.

4.2. The review of submissions

After the final deadline for submissions expired, SDSN Youth convened an Advisory Panel comprising fourteen individuals, including world-renowned experts from different disciplines, representatives of the SDSN Secretariat and members of SDSN Youth Executive. After a first round of review which was conducted by the Solutions Initiatives team of SDSN Youth to exclude incomplete submissions and assess the most interesting applications, sixty Solutions and Ideas were shortlisted and presented to the Advisory Panel to receive individual feedback on each of them. The Solutions and Ideas were graded based on an evaluation of the criteria discussed in Section 3 and the results of this second round of review were evaluated by SDSN Youth in January 2017.



5. THE STRUCTURE OF THE REPORT

After this introductory chapter, the Youth Solutions Report is structured as follows. Chapter 2 provides an analysis of the Solutions and Ideas that are included in the Report. It describes the way in which they are divided based on geography, SDGs addressed, organizational structure, and gender. In addition, it outlines some of the main challenges faced by the submitted solutions and provides recommendations for action for policymakers, investors, and all relevant stakeholders. Chapter 3 contains the fifty Solutions and Ideas that have been selected by the Advisory Panel. Chapter 4 and 5 showcase three best practices in the area of support to youth-led solutions that have been directly organized or supported by SDSN Youth: the Vatican Youth Symposium, organized by SDSN Youth and SDSN in October 2016⁸ and the annual Young Earth Solutions! competition organized by the Barilla Center for Food and Nutrition. Taken together, these projects outline the importance of a diverse range of stakeholders taking the lead in bridging the gap between youth innovators and their supporters.

⁷ Low Emissions Solutions Conference [online]. Retrieved from <<http://lowemissions.solutions>> accessed 25 January 2017.

⁸ SDSN Youth. Vatican Youth Symposium [online]. Retrieved from: <<http://sdsnyouth.org/vatican-event>> accessed 25 January 2017.

Chapter 2

ANALYSIS OF THE REPORT



STATISTICS OF THE REPORT

50

Total Solutions and
Ideas

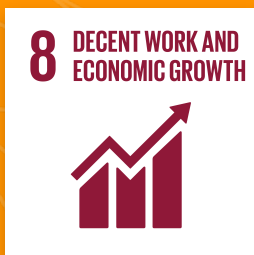
68

Founders in total

57

Total countries of
operations

MOST POPULAR SDGS ADDRESSED:



AVERAGE BUDGETS (RANKED):

- 1) \$5,000 - \$25,000
- 2) \$250,000 - \$500,000
- 3) \$0 - \$5,000 & \$25,000 - \$50,000 (tied)

56%

Independent founders

44%

Co-founders

1. INTRODUCTION

Based on SDSN Youth's review of submissions (as detailed in the introduction), and feedback from its Advisory Panel, this first edition of the Youth Solutions Report showcases fifty sustainable development Solutions and Ideas working in over fifty-seven countries. By including innovative Ideas together with Solutions, SDSN Youth highlights the immense potential of youth projects around the Sustainable Development Goals (SDGs) from the earliest of stages, together with the trends, challenges and opportunities many young people face in bringing these projects to scale.

Together with the support of policymakers, non-governmental organizations (NGOs), and private investors, SDSN Youth hopes to continue fostering the implementation of youth projects and strengthen their inclusion in the 2030 Agenda. In order to do so, however, it is important to understand what are the strengths and weaknesses of the current landscapes of youth-led innovation around the world. As such, in the following Chapter we will discuss the main characteristics of the Solutions and Ideas selected by the Advisory Panel, while emphasizing the challenges and recommendations for action identified from our analysis.

2. TRENDS AND INSIGHTS

2.1. GEOGRAPHICAL LOCATION

How does geography impact Solutions and Ideas?

To be able to establish themselves as self-sustaining, viable projects, youth-led solutions usually have to overcome a range of challenges, including access to capital and business development services, limited visibility and lack of capacity-building programmes. These challenges, and the way they are dealt with by policymakers, educational institutions and private supporters, are inevitably influenced by local contexts, policy frameworks and opportunities, and in turn influence the legal structure of the organizations that are set up, the sources of funding, the use of impact assessment tools, and so forth.

In the Report, there is a trend for youth Solutions being founded in high-income regions like Western Europe and North America. These Solutions, however, are often created by young people originating from countries outside their project's location of establishment, and are also frequently operating internationally, with a specific emphasis on developing countries. This suggests that successful youth Solutions are usually eager to expand beyond the national level and scale their operations up, and that some of them are even specifically set up with the idea of addressing global development problems. By contrast, a large percentage of Ideas appear to be coming from Africa, with most of them focusing on applying the SDGs at the sub-national and local level. As suggested above, this reflects persisting challenges in access to certain structures and fundraising opportunities which might prevent many worthy projects from being scaled.

In other words, the location of a project plays an important role not only in determining the specific issues that are addressed by young innovators, but also the nature of such a project (e.g., a social business, a non-profit, or an informal group) and even its ultimate success or existence. One should not mistake, however, the differences in access to resources with the need to tailor Solutions and Ideas to the most pressing needs of the areas where they are established.

In this context, it is important to note that a growing number of projects are seeking to address specific challenges like digitalization, e-participation, and climate-smart agriculture in lower – to low – income countries. Through increased access to mentorship opportunities from organizations like Ashoka and The Resolution Project, and capital support from investors, founders will be better enabled with the skills and means to achieve the SDGs in both their home countries and across the globe.



[Figure 1 - Areas of operations of the selected Solutions. These include the region where the project is taking place, as well as all places of operation. Credit: Piktochart]

CASE STUDY: Bright Future for Solar Energy

Featured Projects: Solar Lights Project; Solar Puncture Walla; Solar Water Solutions; Liter of Light

Areas working in: Africa, SE Asia, South America, Central America, Europe



Transitioning to renewable energy (SDG 7) is crucial for achieving many of the Sustainable Development Goals related to poverty, including SDGs on health, water, industrialization, and climate change.

Several of the solar projects featured in this year's report incorporate creative educational and entrepreneurial models in their efforts to promote solar energy in off-grid communities. Youth solutions like the **Solar Lights Project** and **Liter of Light**, which emphasize local entrepreneurs promoting renewable resources, present both a scalable and adaptive cultural focus. By addressing specific community needs, such as street lights or energy source transitions, these solutions are providing a multitude of benefits across development levels.

Youth solutions that educate communities on potential savings present a great opportunity for local families to apply or invest their savings in other aspects of development, such as food and improved living conditions. Through innovative Ideas like **Solar Puncture Walla's** tire repair kits and **Solar Water Solutions** submersible aqua pumps, youth solutions are making applied connections on solar to address larger issues on labour, transportation, and agricultural efficiency.



Promoting solar energy helps in eliminating exposure to environmental threats and offers health benefits due to zero emissions of hazardous greenhouse gases. Most of the solutions featured this year, also reported immediate reductions in chest problems, coughing, eye irritation, and illnesses after solar energy sources were adopted in homes.

What are the key goals that youth are working on?

Partially building on the scope of the former UN Millennium Development Goals (MDGs), and suggesting a particular attention by young innovators to the most immediate issues affecting their families and communities, many of the Ideas and Solutions submitted this year appear to focus on social and economic goals such as education (SDG 4), gender equality (SDG 5), health and well-being (SDG 3), and economic growth (SDG 8).



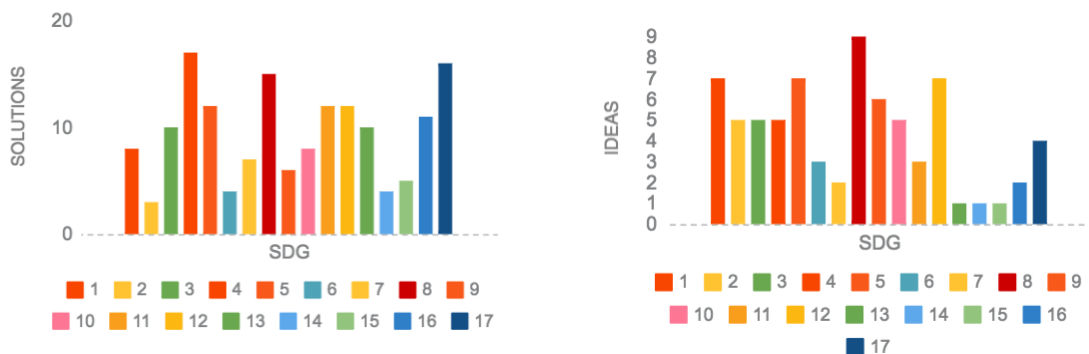
[Fig.2 - The 17 Sustainable Development Goals]

Youth Ideas, especially, showed a specific focus not only in these SDG areas, but also in their interest and basis in working in Africa. Despite the high impact potential of youth in local communities, a large portion of the ideas submitted this year still voiced concerns for help and guidance in transforming their Ideas into full-fledged Solutions.

At the same time, many youth Solutions demonstrated a trend which is consistent with the need to take an integrated approach to the implementation of SDGs and targets. For example, Solutions such as *Solar for Life* and *Liter of Light*, follow entrepreneurial models that blend SDG 8 (economic growth) and SDG 13 (climate change) by creating financial opportunities for communities while educating – and addressing – larger environmental issues.

It should be noted that typically 'environmental' goals, such as terrestrial biodiversity (SDG 15), climate (SDG 13), and oceans (SDG 14), being scientific in nature, could present a barrier for youth participation as indicated in several of this year's submissions. Through an increased emphasis on partnerships (SDG 17), in particular connecting youth with sustainability expertise, SDSN Youth

hopes to share more Solutions and Ideas addressing these areas in future editions of the Youth Solutions Report.



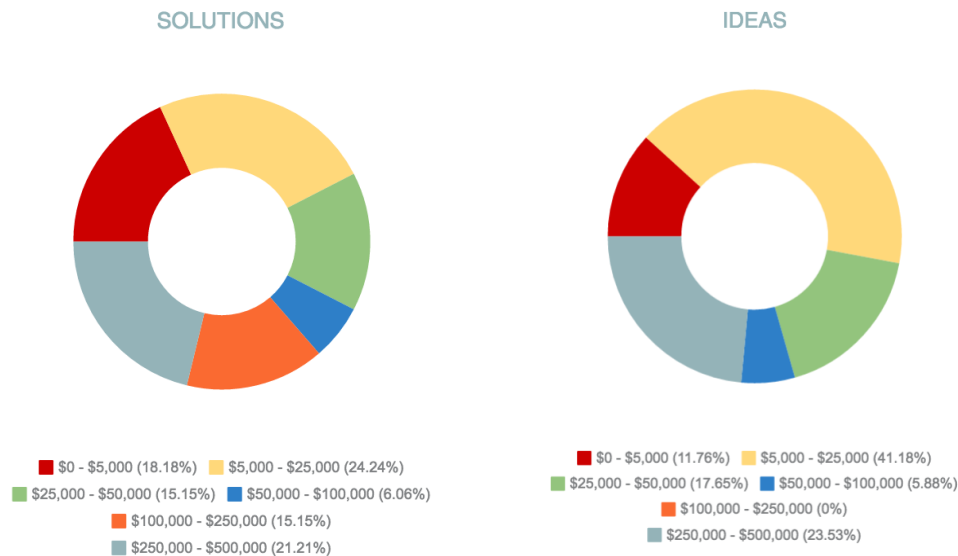
[Fig. 3 and 4 - The Sustainable Development Goals as addressed by young innovators in the 50 Solutions and Ideas. Credit: Piktochart]

2.3 BUDGET AND STRUCTURE

Does one really impact the other?

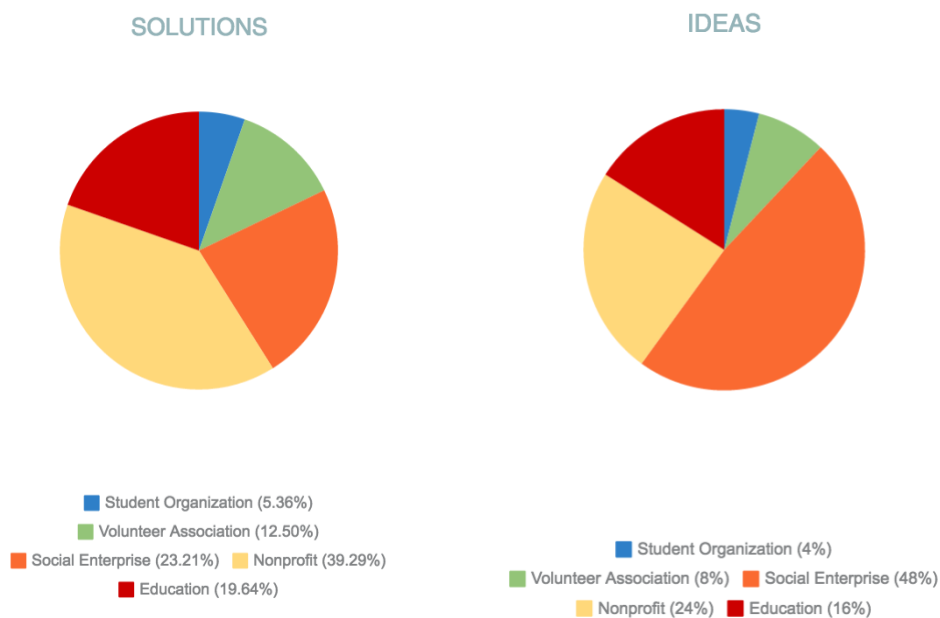
Structural differences between Solutions and Ideas can demonstrate high-risk areas or success rates for youth projects in their transition towards more formalized projects. In the case of this year's nonprofit and entrepreneurial projects, a majority of founders indicated personal finances as their primary, and in some cases, sole source of investment.

Increased mentorship and visibility at the idea phase certainly holds promising potential for guiding youth on realistic approaches and estimations to take when calculating their budgetary costs. Awareness and education on structure type and entrepreneurial models in particular could be an area to develop with youth in the future, especially in creating self-sustaining solutions. At the same time, however, it appears that the choice of a specific model is also determined by significant obstacles in access to capital, which effectively impose the use of small grants or one-off donations and prevents young innovators from developing viable business models in the medium to long-term.



[Fig.5 and 6 - Budget ranges of the 50 Solutions and Ideas. Credit: Piktochart]

Consequentially, and as demonstrated in this year's projects, there was a strong preference towards non-profit models, with 54% of youth Solutions and Ideas indicating they had already taken legal steps in registering their project as an NGO.



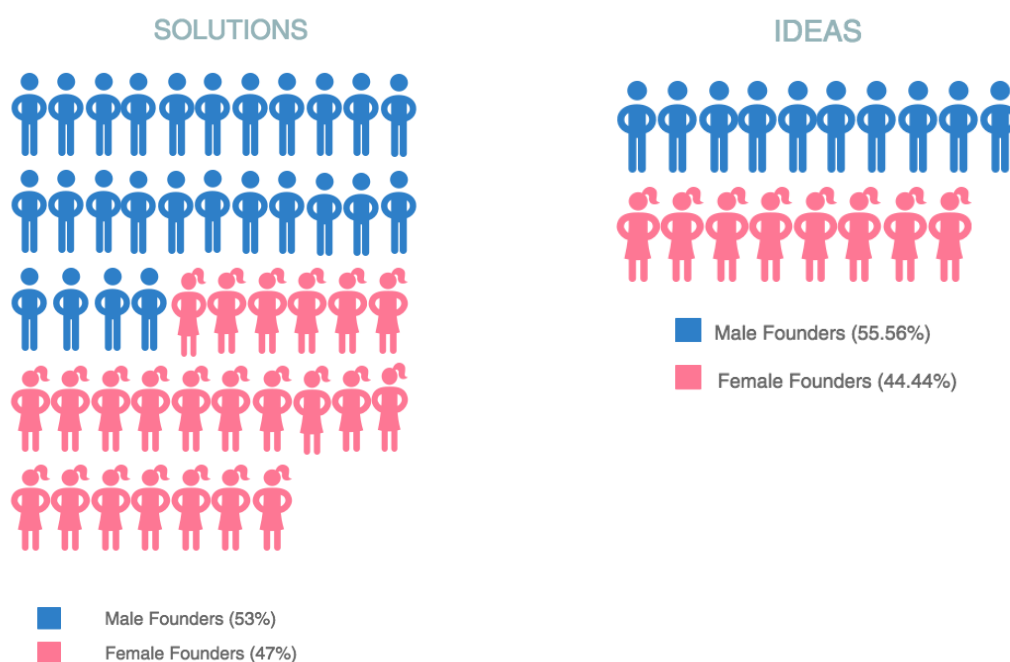
[Fig.7 - The organizational type of the 50 Solutions and Ideas. Credit: Piktochart.]

2.4 GENDER

How equal is gender equality for youth founders and co-founders?

Young men and women in this year's Solutions and Ideas showed relatively balanced levels of representation, with young males leading in both project types. Co-created projects, which accounted for 44% of founder's models, appeared higher in the case of young female founders, especially those at the Idea stage.

Overall, the majority of co-founders for both genders demonstrated a preference for working within their gender group (i.e., female co-founders with other young women, and vice versa for young men). Such a trend in how youth solutions are formed is useful for identifying future areas of support and collaboration amongst young founders and experienced mentors in their field.



[Fig. 8 and 9 - Representation of male and female founders and co-founders in the 50 Solutions and Ideas.
Credit: Piktochart.]

3. CHALLENGES AND OPPORTUNITIES

What are some of the limitations faced by youth innovation today?

Youth solutions and ideas are encountering a multitude of challenges that prevent them from reaching their full potential. Lack of promotion, limited financing and technical support are just some of barriers they face in their efforts to become established. As indicated by many of the Solutions submitted for this year's report and our continued work with SDSN, there are still a number of fundamental and creative ways to support these projects in the future.

3.1. LIMITED VISIBILITY

For many new Solutions, exposure is often one of the largest hurdles when launching in a new community. Raising public awareness to their cause, while gaining understanding for their work amidst social and cultural barriers, are just some of the issues youth projects face when establishing themselves in a new area.

At the regional level, youth communication about their projects poses a unique challenge. Due to development factors like literacy levels and internet access, different media sources are more applicable than others and decisions on a successful approach can take youth crucial time to build. As several of this year's entrepreneurial solutions show, technology and the use of mobile applications are playing an increasing role in addressing many of the SDGs. But with a growing number of solutions interested in working across borders, developing communication strategies that account for cultural context is something they can't do alone.

At the international level, misconceptions about youth inexperience are yet another obstacle young founders must overcome in their efforts to gain media support and recognition from reputable organizations. By promoting pairings between youth Solutions and interested partners, and highlighting their work in this way, we hope to ensure the progress and inclusivity of youth projects working towards the SDGs.

OPPORTUNITIES FOR ACTION

Promotion

Media features, public showcasing, and innovation fairs supported by local governments or academic institutes can dramatically boost connections, finance support, and awareness for Solutions as a result of their promotion on a larger scale.

Mapping tools

Knowing which stakeholders to partner with in a particular area can also help Solutions discover relevant and supportive connections. Through the use of mapping tools, such as online platforms and mobile applications providing organizational information, youth Solutions can benefit by reaching out and avoiding timely - and costly - duplications of work as a result of collaborating and learning best practices forward.

Partnership support

The scaling of youth solutions at both the national and international level is entirely possible. Together, with the help of local nonprofits with similar focal interests, youth solutions can access many of the existing resources and networking benefits needed to help their projects grow - especially those working in rural or remote areas.

CASE STUDY: The Era of Digital Accountability

Featured projects: GBV Help Map; BenBen: Blockchain Secured Land Registry and Transactions; DigiKidz
Areas working in: Global, Africa



Information and communication technology (ICT) is an an electronic means of capturing, processing, storing, and sharing information digitally. The promise of ICT to contribute to poverty reduction lies in its power to give the needy access to improved information and communications. Technology can also play a major role in tackling inefficiencies caused by governmental processes such as fraud, lost records, or digital access.

This year's Report acknowledges several data-driven, youth-led solutions like **BenBen** and **GBV Help Map**, which use crowdmapping to unlock trapped land capital and provide verified medical assistance to their respective users.



This data helps beneficiaries access these services without the burden of stigma,



or doubts, as to the credibility of the providers. Tackling information efficiencies in this way, further assists in promoting investment, reducing poverty and encouraging transparent resource management. As demonstrated by GBV Help Map and Ben Ben, these solutions continue to require increased visibility in order to expand to as many providers as possible and promote their technology across partner networks.

Youth projects, like **DigiKidz**, are diligently working to achieve SDG 16 through the meaningful participation of young people. Building partnerships with established organizations is crucial to ensure inclusion and access to information, as well as scalability on global and national scales. Through an increased use in technology, targeted advocacy, assisted training and mentoring of volunteers and youth leaders, these organizations can continue to prosper.

3.2 ACCESS TO CAPITAL

All of the Solutions showcased in this year's Youth Solutions Report are here as a result of some financial investment ranging from personal funds, grants, or fellowship support. In many cases, however, the funding they receive is not enough to continue covering their many expenses as these solutions grow.

Youth Solutions following startup or entrepreneurial models, for example, involve heavy technological phases, such as the creation of mobile applications and pilot programs that are costly, but necessary steps in demonstrating their scalability to potential investors. Overall, ensuring the longevity of youth Solutions across the 2030 agenda timeline will require a more inclusive approach by both public and private sectors in addressing this gap.

OPPORTUNITIES FOR ACTION

Financing

Increased access to finance is fundamental in overcoming many of the initial operating costs faced by young founders, such as NGO and corporate registration fees, as well as on-the-ground resources and staffing budgets, as Solutions expand in other areas. Innovation grants and prizes on behalf of academic institutions, government, and private investors can provide a much-needed boost to young change-makers working to create targeted SDG projects.

Policy initiatives

Support by local government poses great potential for harnessing youth skills in a more creative way. Designing task forces and environments where young people can discuss and present their Solutions for communities and regions, are just some of the ways to address accessibility and financing of youth projects. Government employment schemes that incorporate young innovators in tackling specific topics, can also serve as a more direct approach to achieving SDG targets at the local level.

3.3 CAPACITY-BUILDING AND SUPPORT

As highlighted by youth Solutions operating internationally, there is a continual need for volunteers and staff with the right training and technical background to assist in the operation of specialized tasks. For projects with heavy scientific and engineering focuses, proper guidance of academic mentors or partners, like research institutions and development NGOs, would help many young founders in overcoming some of the initial challenges they face in developing their ideas into effective and sustainable Solutions.

This year, an overwhelming number of the submissions received were created by student founders who formed their projects as university students. In some cases, the projects expanded across borders, created self-sustaining models, or even continued for others in the form of student associations. For Ideas and Solutions alike, despite their intention of well-developed plans, increased guidance on important management issues such as operating models to choose

from, or activity focus, would help these founders save limited resources while guiding their Solutions in the right direction.

OPPORTUNITIES FOR ACTION

Innovation incubators

The concentration of young innovators within academic institutions could benefit strongly from the increased creation of innovation hubs and mentorship programs that steer students towards practical applications that address SDG targets. Similarly, collaboration across student and faculties would create the kind of hybrid model needed to address the interconnected nature of the SDGs. Even beyond universities, however, the role of innovation incubators and accelerators specifically focused on young people and the SDGs should be promoted by all stakeholders, including NGOs, firms, and business experts

Data collection

Educating youth Solutions on the value of metrics, impact assessment and data monitoring, should play an important role in the mentoring process. If implemented early on in their design phase, youth Solutions stand to benefit from lessons in method collection, efficiency, and accessible data sets to present to potential investors and partners. Local organizations already working with youth Solutions can also be a valuable resource in the collection process, especially for those Solutions working across multiple regions. In addition, building capacity for impact assessment could help youth organizations and social businesses become key contributors to broader data collection efforts under the SDG indicator framework, thereby actively participating in the monitoring of the implementation of the 2030 Agenda.

Education

According to the International Telecommunications Union (ITU), internet access constitutes the main vehicle for online learning and access to educational content for many communities in developing countries. Even in developed countries, however, online learning has become a key component of many programmes offered by leading educational institutions, and in this context has increasingly been associated with the concept of education for sustainable development. As a consequence, public education on sustainable development topics is becoming more accessible.

Massive Open Online Courses (MOOCs), such as those currently run by SDSN's [SDG Academy](#) connect learners with free specialized content by leading experts while providing opportunities to engage with like-minded classmates. Accordingly, they can be used and expanded to train young innovators and build their capacity to align their endeavours with the SDGs and targets.

CASE STUDY: Low Cost and Maximum Impact Lifestyle

Featured Projects: *New Life to Plastic*; *Tyrelessly*

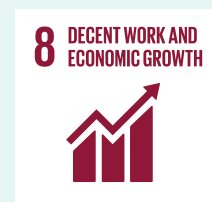
Areas working in: Africa, SE Asia



Tackling big global challenges with low-cost innovation in healthcare, energy and finance is key to ensuring sustainable production patterns (SDG 12). The lack of adequate waste collection and disposal systems in developing countries can lead to environmental degradation and income loss for people affected by health issues as a result.

It is essential to give emphasis to low-cost innovative Solutions that work towards effective waste management and promote reusing and recycling. Few solutions featured in this year's report work on proper waste disposal to prevent the run off of toxic emissions and reuse of plastics as demonstrated by **New Life to Plastics**. Another youth-led initiative, **Tyrelessly**, works on reusing, repurposing, and recreating products from waste materials in tires.

Other solutions indirectly help to create micro-economies and work towards eradicating poverty by providing income sources to women and incorporating disadvantaged groups.



The main idea of these projects is to implement the current waste management system and eradicate the problems that stem from improper waste disposal by raising awareness, educating and sensitizing populations about the environment. Moving forward, these solutions require assistance in education within schools, data collection and financing to support their online platforms, equipment costs and piloting phases.

4. CONCLUSION

With approximately half of the global population under 30 years old today, there is immense potential for the increased presence of youth in solving and contributing to a sustainable future. It is hoped that by examining current practices and trends in youth projects, and presenting their innovative models, we can continue to understand, inspire and support young people's involvement in achieving the Sustainable Development Goals.

The outlined challenges and recommendations for actions represent a wake-up call to policymakers, investors, educators and communities at large, showing how the success of youth innovations is not born in a vacuum, but rather emerges and prospers where there is an appropriate ecosystem that can provide support and opportunities to young students, leaders and entrepreneurs. Whilst civic participation is often used as a metric for youth involvement in national policies and strategies, the way in which countries are able to harness youth skills and solutions to implement the 2030 Agenda is also of utmost importance, particularly if new breakthroughs are to occur both at the government level, as well as economies and societies at large.



IMAGE CREDIT: LITER OF LIGHT

Chapter 3.1

THE SOLUTIONS



Addis Sustainable Life

Organisation: Resolution Project Fellow & African Youth Initiative on Climate Change (AYICC)

Founder: Abiy Shimelis

Year established: 2014

Place of Establishment: Addis Ababa – Ethiopia

Place(s) of Operation: Addis Ababa – Ethiopia

Budget: \$0 - \$5000

Contact: abiyshim@gmail.com

Find out more at: <http://www.addissustainable.com/>

THE SOLUTION

Addis Sustainable Life (ASL) is a campus sustainability and paper recycling social start-up founded by two young Ethiopian entrepreneurs. **It serves as a capacity building platform for young volunteers to make impact in resource efficiency by creating awareness on sustainable living habits.** As part of its business venture, ASL designs and distributes handmade, biodegradable products made from wastepaper and traditional raw materials like “kacha” and “enset” fibers. ASL also helps small-scale local enterprises market and distribute their handmade/eco-friendly paper products for private companies in Ethiopia. ASL blends Ethiopian indigenous skills with contemporary designs producing aesthetic paper products available for both local and international markets.

As a social venture, ASL is important as it addresses one of the most important elements of sustainability such as resource efficiency and paper waste recycling; mobilizing youth for climate action. Most importantly, ASL functions as a creative platform for young green entrepreneurs to create income by marketing and distributing eco-friendly paper products while helping protect their environment. It also encourages and sensitizes private companies to go green while using aesthetic recycled paper products to promote their business.

THE RESULTS

The three major impact areas of ASL are generally youth Capacity Building for Climate Action, Supporting Green Entrepreneurship and Creating Awareness on resource efficiency and proper waste management practices within campuses.

- As of the last semiannual report for 2016, ASL has been able to reach 123 indirect beneficiaries and 49 direct beneficiaries since its launch in 2014. These mainly consist of University students and youth volunteers in Addis Ababa.
- It was able to reach more than 25 private companies - out of which it received orders from 6 companies.
- ASL was able to support 1 small-scale local green enterprise so as to provide better market reach for its green products and enhance distribution of recycled paper.
- In capacity building and advocacy: ASL was able to conduct/present on 4 international seminars on Climate Change and sustainability including CCDA 5 - Victoria Falls (70 youth participants), Dar es Salaam – African Climate Talks (ACT), Hargeissa University (20 Somaliland university students) and 21st Conference of Parties (COP21) – Paris. This had impact in inspiring young green entrepreneurs by sharing our work plan so that they can replicate our experience



A Global Voice for Autism



Organisation: A Global Voice for Autism

Founder: Melissa Diamond

Year established: 2014

Place of Establishment: Jenin, Palestine

Place(s) of Operation: Jenin, Palestine, Ramallah, Palestine, Irbid, Jordan (Workshops), Mersin, Turkey (For Syrian and Iraqi refugees), Minneapolis, USA (Somali Community)

Budget: \$100, 000 - \$250, 000

Contact: melissa@aglobalvoiceforautism.org

Find out more at: <http://www.aglobalvoiceforautism.org/>

THE SOLUTION

A Global Voice for Autism exists to help children with autism in conflict-affected communities communicate independently. I established A Global Voice for Autism after traveling to Jerusalem and meeting a mother of a child with autism from the West Bank who locked her daughter in her home due to the autism stigma in her community and the lack of resources available to support her. This mother initially asked me for help to procure a scholarship for her daughter to receive services in the United States and, while trying to help her, it simultaneously became clear that no such resources were available for international families in the United States and that if this mother was struggling with autism stigma and a lack of resources in her community in the West Bank, there must be other families struggling in the same way. After a research trip to the West Bank, during which I stayed with this family and experienced the mother's daily stress and mental health struggles and spoke to other families of children with autism in the community, I determined that a holistic approach to autism support was needed in the community in order to provide families with the emotional support they would need in order to foster a healthy environment for their children with autism.

People with autism have much to contribute to their communities and when they are denied their right to access education and the right to access their communities they never have the chance to reach their full potential, and to form meaningful relationships with/ contribute to their communities.

Our program's holistic approach works to ensure that the needs of all stakeholders in the lives of children with autism are being addressed so that these children can grow up in a healthy environment where they can learn and thrive.

THE CHALLENGE

In conflict-affected communities, the needs of children with autism and their families are often overlooked due to the plethora of needs that exist within these communities. Furthermore, community focus on day-to-day survival limits the amount of information about autism and disability that reaches these communities, resulting in misconceptions about autism (such as autism being caused by bad parenting) that lead children with autism to be excluded from education systems and parents of children with autism to be marginalized by the communities.

Furthermore, in United States communities where autism resources exist, research has shown that mothers of children with autism experience stress equivalent to that of combat soldiers. For families who have experienced war and trauma and who live in communities where no resources exist and that discriminate against them for their children's diagnoses, this stress is amplified. Without intervention and support, this can lead to debilitating mental health issues and domestic violence.

THE RESULTS

97% of sibling participants have reported increased self-confidence, improved relationships with their siblings with autism and improved confidence in their ability to interact with and teach their siblings with autism new skills; 96% of children who participated in our Jenin and Ramallah programs either developed independent methods of communication for the first time during the program or improved upon existing methods of communication; 92% of our local volunteers continue to volunteer with A Global Voice for Autism after the conclusion of their three-month commitment to our community-based programs; 60% of families continue to participate in our online follow-up and support program one year after the conclusion of their 3-month on the ground training program.

Bean Voyage

SOLUTIONS



Organisation: Bean Voyage

Founder: Abhinav Khanal, Chief Strategic Officer

Year established: 2015

Place of Establishment: Indiana, USA

Place(s) of Operation: Indiana, USA & San Jose, Costa Rica

Budget: \$25, 000 - \$50, 000

Contact: 1di.nepal@gmail.com

Find out more at: <https://beanvoyage.com/>

THE SOLUTION

Bean Voyage is a social venture that collaborates with smallholder coffee farmers in Costa Rica to cultivate their visions while providing the consumers of coffee with high quality speciality coffee, right at their doorstep. Founded in 2015 by a group of students at Earlham College, the venture provides an e-marketplace for the consumers and producers of speciality coffee. Through the use of our service, farmers can generate an income that is up to 300% higher than what they are traditionally receiving for their hard work, while consumers are able to choose from a wide selection of speciality coffee while learning more about the process of coffee production.



THE CHALLENGE

Smallholder coffee farmers are receiving less than 17% of the revenue from the sales of coffee. Such low rate of return has led to significant reduction in coffee production by 13.8% (2013-2014) in Costa Rica. Smallholder farmers are forced to leave their homelands in search for better opportunities in urban centers or in other countries. The speciality coffee industry is currently dominated by private roasters and corporate retailers that source green beans in order to retain a greater percentage of revenue within their organizations.

On the other hand, socially conscious coffee consumers, also known as Third Wave Consumers, are demanding greater connection with the origin of speciality coffee, while learning more about the process of coffee production and the farmers. There is a market for more than just a regular cup of coffee.

THE RESULTS

The project has worked with seven smallholder coffee farmers to establish a channel of exporting speciality coffee into the United States of America while removing the different intermediaries that currently exist. Furthermore, the project has been able to begin sales.

GROWTH & EXPANSION

There is an excellent opportunity in the market for our venture as it is notable to see that speciality coffee consumption in the United States of America is expanding continually over the years. Sales of specialty coffee is increasing by 20% per year and is responsible for almost 51% (2014) of the 18 billion dollar U.S. coffee industry. In this wave of speciality coffee consumption, customers are demanding greater awareness of where their coffee comes from and where their money is spent, and are demanding greater connection with the producers. While increasing the level of involvement, customers want the service to be provided rapidly, while ensuring the high quality of their coffee. The potential market size for our venture is made up of 30 million speciality coffee consumers in the United States for our initial operation. They will be targeted through various instruments of coffee sales such as e-commerce sales, and bulk sales via speciality coffee shops (29300).



BenBen:Blockchain Secured Land Registry and Transactions

Organisation: BenBen

Founder: Emmanuel Noah, CEO

Year established: 2014

Place of Establishment: University of Michigan

Place(s) of Operation: Accra, Ghana

Budget: \$250, 000 - \$500, 000

Contact: info@benben.com.gh

Find out more at: <http://benben.com.gh>

THE SOLUTION

Based in Accra, Ghana, **Benben is a digital land information platform that aims to tackle the inefficiencies of land administration to promote investment, reduce poverty and encourage transparent land resource management.** We leverage Blockchain technology to provide Governments , Financial Institutions, Realtors and the general public instant access to property information through an easy to use searchable interface. We interface with our customers to enable them to digitally make payments on their land/ property i.e property tax , annual rents, mineral royalties etc.

BenBen was formed by cofounders, Daniel Bloch and Emmanuel Noah, who met as students the University of Michigan where Daniel lead the school's Blockchain student organization and Emmanuel studied Economics. Currently, our team works in collaboration with the Ghana Lands Commission to create a Blockchain powered land registry that is used by financial institutions to provide lending and citizens to manage their properties. We actively survey these land parcels using innovative technologies such as satellite and drone imagery to ensure accuracy of the data.

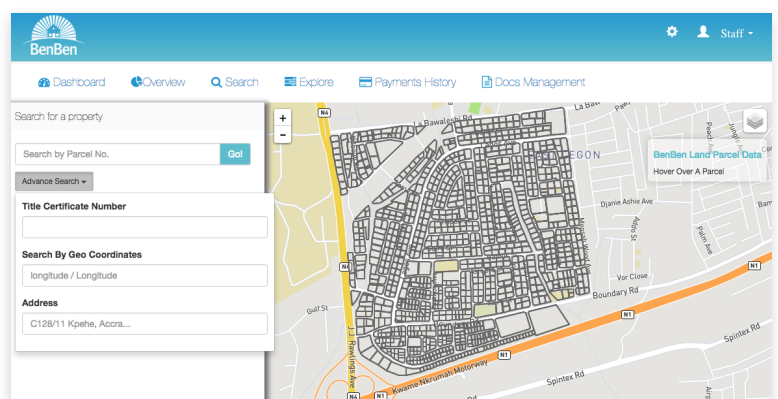
The Blockchain is a proven global ledger book and we aim to tackle these inefficiencies of land administration to spawn a new era of investment and development. Additionally, we aim to make Ghana a model for the adoption of Blockchain technology in the government sector which will give the confidence for further adoption.

THE CHALLENGE

In Ghana and throughout the developing world land records are stored in paper which overtime become lost, stolen, and inconsistent among the many government departments. This lack of trusted land information leads to fraud where people can sell land that is not theirs and furthermore without secure records financial institutions cannot provide lending to the properties. This leads to trapped capital which is land that cannot be bought, sold, or collateralized that is estimated to be a \$20 Trillion global problem.

THE RESULTS

In June of 2016 BenBen received a letter of intent from the Ghanaian Lands Commission to develop a national land information system and property payments platform. This endorsement has allowed us to commence our first pilot and begin populating the BenBen platform with the government's land data. We measure our results by the number of secure and trusted land parcels on our platform in addition to the number of active users. Currently, BenBen has approximately 3,000 properties on our platform and our first user which is Barclays Ghana.



COP in MyCity

Organisation: CliMates

Founder: Juliette Decq

Year established: 2013

Place of Establishment: France

Place(s) of Operation: France and abroad

Budget: \$5000 - \$25,000

Contact: juliette.decq09@gmail.com

Find out more at: <http://copinmycity.weebly.com/>

THE SOLUTION

COP in MyCity is a youth-led project with the ambition to bridge the gap between climate negotiations (Conferences of the Parties) and youth in order to inspire local climate actions in all cities of the world.

The goal of this project is to raise awareness among Youth on climate change issues, to foster education and action about climate change locally and create an international community of youth climate leaders.

COP in MyCity has 3 main objectives:

- To empower youth through training and concrete local climate actions
- To deepen the interconnections existing between international climate negotiations and local climate action
- To create a strong international and intercultural community of young change-makers committed to the fight against climate change

To answer these objectives, the project is divided in 3 steps :

1. **Training:** In order to reach as many people as possible, we need to ensure that everyone understands what is at stake. It can be done with micro-conferences that call back causes, consequences and issues about climate change.
2. **Simulation:** With the help of our toolkit (available in English, Spanish and French), the simulation is at the heart of our project: you need to work on proper arrangements for conducting an interesting simulation. Role-playing simulation games are one of the best tools to make people understand climate negotiations and climate issues because they are directly immersed as main actors.
3. **Mobilization:** This time is devoted to discussion within our team and within the COP in MyCity community. We share the results of our simulations and get all our positions reviewed. This is also the time where we launch concrete projects for attenuation and adaptation to climate change, allowing us to link information, empowerment and action.

THE RESULTS

Since its creation, COP in MyCity has grown spectacularly. In 2015, the project has reached more than **8,000 people**, through more than **130 events** (trainings, simulations, actions) organised in **28 countries**, across all continents. COP in MyCity is based on a team of volunteers who coordinate the project, and above all a community of dozens of COP leaders.

GROWTH & EXPANSION

COP in MyCity is an international project. In 2015, simulations were organised in 28 countries.

The team is currently working on the development of our toolkit, with the goal of translating it in 3 other languages (chinese, portuguese and german). Thus, we will be able to reach and train more young people in other areas.

We are also trying to organise simulations for young professionals inside their companies in order to encourage them to implement new ways of working.

Organisation: Resolution Project

Founder: Veaceslav Cretu, CEO

Year established: 2015

Place of Establishment: Republic of Moldova, Ialoveni District

Place(s) of Operation: Mainly focused in high schools of Ialoveni District

Budget: \$0 - \$5000

Contact: veaceslavcretu@gmail.com

Find out more at: <http://www.resolutionproject.org/ventures/digikidz-computer-science-summer-camp-high-school->

THE CHALLENGE

As technology and our dependence upon it advance at lightning speed, computer skills have shifted from the optional to the necessary. According to the Global IT Report 2012, Republic of Moldova, in terms of people skills was assessed with 5 points out of 7 possible (place 65 of 142). **Republic of Moldova, as well as all countries over Europe, faces with increasing ICT skills gap and with a low level of digital literacy.** These drawbacks caused by the insufficient use of Information Society advantages and even the removing of many citizens from ICT-based society and economy.

These facts are most seen in educational institutions from the rural areas of the country. In those educational institutions students still study from outdated curriculum, they don't have the latest versions of educational computer software or qualified teaching staff. Also, in the summer-break (3 months long), students don't have the possibilities to get involved in youth programs, either those are far or are too expensive to afford, as some of students are from economically disadvantaged groups. The rate of an inclusive and quality education is limited because of the poor usage of digital tools in the rural high schools. development issues.

THE SOLUTION

DigiKidz is an ICT project designed to implement a sustainable model of IT Education and Computer Literacy for high school students. It focuses mainly on students who come from underprivileged families or orphanages in the Republic of Moldova. The purpose of this project is to develop a network of digital ambassadors that will become our local agents of change in their communities. They will ensure our project sustainability and promote digital literacy.

DigiKidz offers students the opportunity to have direct mentorship from professional trainers, hands on new digital technologies and e-learning programs for personal-educational development.

DigiKidz was founded on the principle that people can do remarkable things when technology is within reach. Core to its mission is creating immersive and inclusive experiences that inspire lifelong learning, stimulating development of essential life skills – communication, collaboration, critical thinking, creativity, character, citizenship and computational thinking – and supporting student passions for digital technologies.



THE RESULTS

Our project achieved the following results: **(i)** Received The Resolution Project Fellowship; **(ii)** Developed an up to date digital curriculum relevant to world's skill demand; **(iii)** Partnered with 5 local high schools, 2 national non-profit organizations; **(iv)** Received support from Moldovan Government, Department of Education, Moldovan - American community in US, and local governance; **(v)** Raised more than 5,000 \$ in funding and 2,000 \$ as pro bono services; **(vi)** Obtained national media coverage and was featured in HuffingtonPost; **(vii)** 20 students became certified as digital ambassadors; **(viii)** Officially received the consent of 3 high schools to open local clubs; **(ix)** 12 students were accepted to higher educational institutions and received scholarships; **(x)** Partnered with 2 local IT companies for career development.

Organisation: Open Centre Africa

Founder: Elizabeth Alampae Ayamga, Research & Advocacy Coordinator

Year established: 2014

Place of Establishment: Ghana

Place(s) of Operation: Ghana

Budget: \$100,000 - \$250,000

Contact: elizabeth@opencentreafrica.org

THE CHALLENGE

Education at all levels is not complete until the students/pupils turned out to reach the consumers - that is, the higher educational institutions and the job market. **In Ghana, however, all higher educational institutions and the job market have complained that most students disqualify themselves long before applying, simply because they do not know much about their structure, programmes, requirements and competition.**

By the time they get to know, it becomes too late to make any amendments. Application for admission is, therefore, a gamble; with those who want to be sure of admission buying as many forms as possible - no matter the cost. Sadly, by virtue of bad choices and ill-preparation in schools, resulting not from inability, but rather from ignorance and naivety, most students lose focus on their education and career paths leading to adverse effects on their future. This project will therefore help the student make informed decisions based on accurate and up-to-date resources.

THE RESULTS

A Prototype of EduLinks was developed and registered in 2014 and has since been piloted using some selected schools and individuals. The intention is to make the project available for free online and also to be installed on the computers of all senior high schools in Ghana. Consultations are currently ongoing to preinstall the software on the Government of Ghana laptops being distributed to schools and teachers. Since the structure, programmes and opportunities keep changing, research will be conducted more often to update the information.

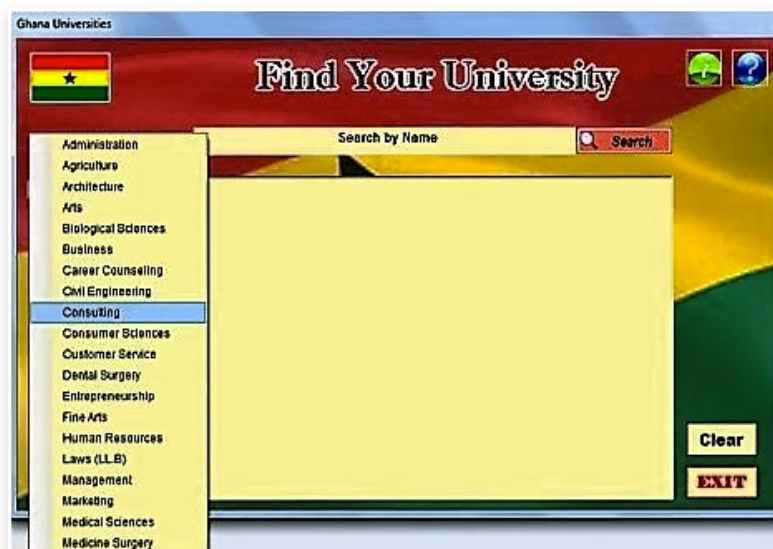
THE SOLUTION

EduLinks is an education and career counseling software that seeks to give full access, equal opportunities, best chances and the greatest competitive advantage to everyone aspiring to go beyond first and second cycle education in Ghana. The project will develop an up-to-date online/offline database of information from accredited higher educational institutions in Ghana for prospective students. This is intended to bridge the information gap which mostly leads to students disqualifying themselves long before applying to higher educational institutions or for jobs, simply because they do not know much about their structure, programmes, requirements and competition. The idea of EduLinks follows a baseline research conducted by the initiators based on their personal experiences of naivety arising out of lack of information while schooling in Ghana.

The software features components such as:

- Opportunities and prospects offered by various courses and programmes run by higher educational institutions.
- Geographical locations of the various tertiary institutions on the Ghana Map
- Accredited higher educational institutions available in Ghana

With such information, students have full access to endless alternatives in case their best options do not materialize; Good strategies to mitigate the ever-escalating competition which continually narrows all access to higher education and job market; and the, shortest path to the peak and best of higher education and job market at minimal cost.



Fin Fighters Shark Investigation and Citizen Shark Science program

Organisation: Fin Fighters

Founder: Lou Ruddell, Director

Year established: 2015

Place of Establishment: Morocco

Place(s) of Operation: Morocco

Budget: \$5000 - \$25,000

Contact: info@finfighters.org

Find out more at: <http://www.finfighters.org/>

THE SOLUTION

The Fin Fighters team works together with fishermen, researchers and volunteers, collecting information and genetic data from Moroccan fishing ports and markets. Morocco was chosen for the first part of this program as it is not only an area where vulnerable and endangered Sharks and Rays migrate and breed, it is also an area where industrial and artisanal fishing is poorly understood and as such is currently not well managed.

The results of this program inform research on the impacts of shark and ray fishing in this region and provide vital scientific samples for research and studies on monitoring populations and genetic health. In addition, results are the basis for generating advisory management reports, implementing improved sustainable fishing practices in small communities and constructing educational programs that enable fishermen to better understand and follow current fishing laws - reducing the impact of Illegal, Unregulated Unreported fishing. The Moroccan investigation is part of the larger Fin Fighters Citizen Shark Science program (CSS) – a solution based approach to conservation that has the potential to have global impacts through its rapidly growing volunteer participation and expanding scientific involvement.

THE RESULTS

We have conducted two expeditions to Morocco, which enabled our team to connect with and survey fishing communities to inform our education plan. We are finalising our fishing community education program based on the last two expeditions information. This will be rolled out in 2017.

To date we have collected over 400 genetic samples in Morocco which are currently being utilised in over 5 different scientific studies on species from the region as well as the first ever Moroccan Baseline for sharks and rays - this is essential for any future study in the region - none of these studies would have been possible without this data. We have begun compiling our first report into the health of shark and ray populations in the region utilising the evidence collected so far - this will be published in early 2017 and will go on to inform our first government proposal for fisheries management in Morocco.

THE CHALLENGE

Currently in Morocco - as with many developing coastal countries - **Illegal landing and trading of protected and endangered shark species is rife**. This is in part due to large scale industrial fishing in their territorial waters, and due to a lack of fisheries management/understanding of restricted species and rules around landings in smaller communities.

Further to this; there is an enormous lack of information and scientific data available to better manage these issues and ensure sustainable catches for future generations of Moroccan fishermen - it is what is known in science as an at risk data cold spot.

As such it is extremely important to understand the impacts of fishing vulnerable species such as sharks in this area; if this region and the species here continue to be data poor, it is all vulnerable to over-exploitation and eco-system collapse.



Floreo Solar Lamp Adoption Project



Organisation: Change Partners International

Founder: Akachukwu Okafor and Kenechukwu Mbanisi

Year established: 2014

Place of Establishment: Kaima, Bwari Municipal Council, Federal Capital Territory (FCT), Abuja.

Place(s) of Operation: Kaima, Bwari Municipal Council, Federal Capital Territory (FCT), Abuja.

Budget: \$0 - \$5000

Contact: a.okafor@floreoenergy.com,
k.mbanisi@floreoenergy.com

Find out more at: <http://www.floreoenergy.com/>

THE CHALLENGE

Many households in remote and poorest, marginalized communities in Nigeria that are not on the electricity grid spend over 40% of their income on energy technologies and services that are both harmful to their health.

The situation is made worse because these poor populations do not have access to health care services to treat and manage the diseases that the use of kerosene lamps, candles and dirty energy technologies expose them to. Access to alternative, clean, efficient, cost effective and affordable solutions would reduce the income of these populations that are spent on having access to energy and will improve their lives and livelihoods depending on the area of their lives that the use of these technologies is applied to.

Enrollment in secondary schools in Africa is expected to double over the next 15 years, and by 2050, one in five people will live in Sub-Saharan Africa. Secondary education offers a huge opportunity to fix the broken promise of education and capitalize on a largely untapped resource for change. In a world where 50% of the world's children are expected to be African by the turn of the century, reforming secondary education is a catalytic, high leverage solution to youth unemployment and consequent development issues.

THE SOLUTION

Work on the solution started in 2012 after reports and statements by Nigeria's Ministry of Power indicated that **current efforts to increase electricity delivery would be focused on locations that are currently on the grid which will only reach 75% of Nigerians by 2020.** This meant that poorest and marginalized populations with no access to electricity will have to wait indefinitely to have access to electricity. While our objective is to ensure that as many households as possible in these remote subsistence rural farming communities have access to clean, efficient, cost effective and affordable renewable energy services and technologies, the components of our project are fourfold:

- (i) Provide the right knowledge/information of current harmful energy fuels and technologies in use;
- (ii) Provide the right knowledge/information on the wide benefits of new alternative energy technologies available and ways to have access to them;
- (iii) Provide financial system and assistance to enable affordable households have access to these new technologies;
- (iv) Provide new technologies for purchase and other pre and post technical and non-technical support services.



THE RESULTS

The results were measured by a monitoring and evaluation survey, and interviews in the community. Over 25 households with over 200 persons have now bought and are using solar lamps with many testimonies to its benefits including: (i) Cost savings or no cost to energy technologies for lighting; (ii) Reduced incidences of attacks from poisonous insects and crawling creatures during at night; (iii) Reduced pain in the eye especially for children and women that use kerosene lamps to study and do chores; (iv) Increased study time at night for school children and students; (v) Increased time for business/trading

Green Impact

SOLUTIONS



Organisation: National Union of Students UK

Founder: Anna D'arcy

Year established: 1992

Place of Establishment: United Kingdom

Place(s) of Operation: Mostly in the UK but there are now also organisations in Edmonton, Canada and Brussels, Belgium using the program

Budget: \$250, 000 - \$500, 000

Contact: annadarcy123@hotmail.co.uk

Find out more at: <http://www.nus.org.uk/greenimpact>

THE SOLUTION

Green Impact is the National Union of Students UK's flagship sustainability engagement programme. Initially a programme purely for students' unions, now Green Impact is a national programme across UK tertiary education, and increasingly off-campus and internationally too.

Each organisation that uses the Green Impact model develops their own bespoke programme creating a simple but sophisticated online tool to guide and monitor people's progress. All Green Impact toolkits tend to cover traditional environmental management practices as well as social sustainability issues like Fairtrade, ethical investment, wellbeing and happiness. Each year bronze, silver and gold awards are given to teams within each organisation adding light competition and a useful way of inspiring and recognising achievements. Students receive training to enable them to support and verify each programme aiding their own understanding of sustainability and social justice as well as their professional development. To ensure people stay engaged, there is an Excellence tier, for participants that have achieved two consecutive gold standards, and gives them a year away from the toolkit to deliver a bigger, whole-institution, transformational sustainability initiatives.

Although the student volunteers tend to take part in Green Impact through the informal curriculum, an increasing number are getting involved through their studies. This bridge between formal and informal curriculums has, in many institutions, been the impetus for further education for sustainable development (ESD) activity. NUS is run by students, for students.

THE CHALLENGE

Longitudinal research we've undertaken shows that 80% of students feel their institution should be doing more on sustainability and 60% want to personally learn more about it.

Employability is becoming a key issue for students, it helps that Green Impact is based around students as mentors and auditors, as student development makes the scheme core business for tertiary education institutions.

People at work often do not feel empowered to take action on sustainability. They're not sure what they can do, or whether they're allowed to do it. Green Impact provides a framework and legitimacy for environmental champions to do more, helps break down departmental barriers, and empowers them to become impactful change makers. In addition, offering a fun way for staff and students to work outside the parameters of their everyday roles, the effects on morale and productivity can be huge.

THE RESULTS

This year Green Impact is being run in 270 organisations, with **1,889 Green Impact teams** or departments, reaching **29,191 staff**. NUS has **trained 352 students** as mentors and auditors.

Since 2009, NUS has trained and empowered more than 3,620 students to be a part of Green Impact. Before this date we do not have accurate records but it is likely that this figure is in practice over 5,000.



Health Impact Fund



Organisation: Health Impact Fund

Founder: Peggy Tse, Director

Year established: 2010

Place of Establishment: United States

Place(s) of Operation: USA, Canada, China, Hong Kong, Norway, India

Budget: \$250, 000 - \$500, 000

Contact: peggy@healthimpactfund.org

Find out more at: <http://healthimpactfund.org/>

THE CHALLENGE

Health Impact Fund (HIF) aims to resolve three key issues in the industry of incumbent pharmaceuticals.

(1) **Price:** We have way too expensive drugs, which would take an average Joe's months of salaries to afford. Interesting enough, these drugs can be 50x cheaper post-patent once their generic cousins come into the market.

(2) **Access:** In this age of abundance, there is still 1 in 3 people globally lacks access to essential drugs. In some developing countries, this increases to 1 in 2.

(3) **Inequality:** In global health, the 10/90 gap exists - meaning only 10% of financial and strategic resources are invested are spent on developing countries where 90% of preventable diseases happen.

THE RESULTS

We chose the topic of growing resistant forms of tuberculosis as the subject of our Health Impact Fund (HIF) pilot program in December 2015.

We partnered with Johns Hopkins University and Hinduja Hospital in Mumbai to undertake a study of treatment outcomes. The study includes detailed data on clinical and functional outcomes of patients, as well as costs, including patient and caregiver time. An important goal of this study is to demonstrate the feasibility of measuring outcomes of new drugs in treating diseases in the presence of complex and individual-specific treatment protocols.

The study is designed to test the practical effectiveness of new drugs as they are introduced to the highly active tuberculosis clinic at Hinduja Hospital. It thus provides, on a small scale, an example of the kind of study that can support measurement by the Health Impact Fund to aid in the assessment of the health impact of new drugs registered with the fund.

THE SOLUTION

Health Impact Fund (HIF) is a solution for equitable access of drugs for all. It works in 3 components.

(1) Measuring health impact: We measure the health impact achieved by a new pharmaceutical innovation globally. We use the golden standard of assessing drug effectiveness in the public health field and take into the factor of access (i.e. the number of patients taken and benefitted from the drug).

(2) Smart capital allocation: We pool together funding from governments and international aid organisations and allocate the sum to pharmaceutical companies in proportion to the effectiveness they have achieved based on our benchmark with their new products. This is a smart capital allocation method for governments and international aid organisations on their drug subsidy and expenses, as this can maximise the impact on each dollar they spend.

(3) Indiscriminate price tag for all patients: In exchange for the reward pool financial reward, we ask the pharmaceutical companies to price their drugs at cost globally. This is the key to ensuring accessible and affordable drugs for all.

GROWTH & EXPANSION

For HIF, we target pharmaceutical solutions that can cure 90% of the global population (which these households generally have lower income). Given the much larger market of end-consumers (over \$1tn), we are confident in generating market and revenue growth similar to the orphan drug market, if not higher.

Heat Wave in My City



Organisation: CliMates

Founder: Aglaé Jézéquel et Guillaume Le Labousse

Year established: 2014

Place of Establishment: Paris, France

Place(s) of Operation: It is an international project conducted from Paris. A tool kit exists for New York, Paris, Buenos Aires, Bordeaux and Copenhagen. We will soon export the project to Cameroon and Mali.

Budget: \$0 - \$5000

Contact: heatwave@climates.fr

Find out more at: <http://www.studentclimates.org/heatwave-in-mycity/>

THE SOLUTION

Heat Wave in MyCity is a youth-led serious game that aims at raising awareness and training students and professionals to climate & energy issues and to local governance in the context of climate change. It takes participants on a journey to 2045 while their city is facing a major heatwave crisis. Each participant plays the role of one key stakeholder to the crisis and should propose an action plan to tackle it - in accordance with other stakeholders' interests. The challenge is even greater for the participants as they face budgetary, water and energy constraints. The first Heat Wave in MyCity simulation took place in New York during the 2nd CliMates International Summit in August 2014. Two simulations were held simultaneously gathering more than 40 young people from around the world.

THE CHALLENGE

The occurrence of heat waves is expected to increase because of climate change and the urbanization process brings the challenge of city governance.

While it's still urgent to increase our action to mitigate climate change it has also become inescapable to get prepare to unavoidable impacts of climate change. That is why CliMates decided to complement its training solutions toward adaptation to climate change.

THE RESULTS

Heat Wave in MyCity has already trained circa 200 participants and aims to accelerate the process with the international tool kit allowing everyone to organize a simulation. After an event, we gather the propositions made during the negotiation and compare the results to simulations held in other cities.

We have a sustainable partnership with the City of Paris : we organized a Heat Wave in MyCity simulation with French students in 2015 and another simulation is planned for October this year.

The project has also been presented during the UNESCO scientific conference "Our Common Future Under Climate Change" (7th-10th July 2015) and was granted with the COP21 label.

The main objectives of the Heat Wave in MyCity project are :

- Confronting local and global perspectives on climate change consequences
- Learning about heatwave consequences: impacts, scientific information available, costs of climate change,
- Questioning short-term and long-term policy options and urban development pathways, opening up imaginary about the future of cities,
- Designing innovative and practical solutions (technological but also organisational, behavioral, etc.) to a particular but tricky problem as a heatwave,
- Encouraging participants to learn about the issues and interests at stake by performing a stakeholder analysis - raising awareness about coordination and cooperation challenges.





Founder: Bonnie Chiu, CEO

Year established: 2013

Place of Establishment: Hong Kong

Place(s) of Operation: UK, Hong Kong, Pakistan, Bangladesh, India, Cambodia, Thailand, Indonesia, Bhutan, Philippines, Kenya, Vietnam, Russia

Budget: \$0 - \$5000

Contact: bonnie@lensational.org

Find out more at: <http://lensational.org>

THE SOLUTION

Lensational is a non-profit social enterprise which aims to equip women in developing areas with financial independence through photography.

The four key steps in our business model are:

Collecting second-hand digital cameras from individuals and corporates.

Photography training: Lensational conducts photography training for marginalised women in partnership with local organisations. Lensational has published a 50-page manual that guides our local volunteers in the 8-hour standard training, validated by photographers, psychologists and researchers. It covers basic camera techniques, emotional expression and storytelling.

Selling photos: Photos taken by our participants will then be sold through our online platform, exhibitions and corporate sales partners, which include Getty Images, Wellcome Images and PhotoConcierge. 50% of revenue goes back to the participants; 50% goes back to Lensational. The profits are then reinvested into the programme for further expansion.

Continuous training: Once the basic training is complete, participants can choose to receive on-going training and mentoring in advanced photography, entrepreneurship and journalism from experts in the Lensational network.



THE CHALLENGE

1) Women's lack of free expression

According to the 2013 Global Gender Gap Report, of the world's estimated 796 million illiterate adults, 64 per cent are women — restricting access to information, education, and public debates. Through being denied a voice, many women are being denied a fundamental right, are facing barriers to their active participation in society, and, in many cases, are facing additional limits on their ability and opportunity to play a part in improving their own lives. Tackling the barriers from poverty to discrimination to laws that limit access to freedom of expression is vital.

2) Women's economic dependence

As women earn only one-tenth of the world's income, they are barred from making basic life choices for themselves and their children independently. However, increasing women's economic participation is difficult, since women spend two to ten times as much as men on domestic and care responsibilities, especially in the developing world where family size is larger.

THE RESULTS

Lensational has conducted photography training for 400 women in 11 developing countries: Indonesia, Philippines, Pakistan, Bangladesh, India, Thailand, Cambodia, Kenya, Bhutan, Vietnam and Russia. Their photos and stories — which would have otherwise remained silent — have been shared with over 10,000 followers on our social media channels, global media outlets including the Guardian, TEDx and ABC News, and over 1,500 visitors to our exhibitions in London, Hong Kong and New York.

Liter of Light

SOLUTIONS



Organisation: Liter of Light Italia

Founder: Lorenzo Enrico Nicola Giorgi, Executive Director

Year established: 2011

Place of Establishment: Philippines

Place(s) of Operation: Malaysia, Indonesia, Colombia, Brazil, Mexico, Chile, Italy, France, Netherlands, Morocco, Egypt, Senegal, Ghana, India, Pakistan

Budget: \$100, 000 - \$250, 000

Contact: lorenzogiorgi@literoflight.it

THE SOLUTION

Liter of Light redesigns solar lighting for the developing world. Our simple, two-step technology creates local jobs, teaches green skills, and empowers energy-poor communities. Rather than depending on imported, patented, and expensive technologies, our grassroots green lighting movement embodies the principle that anyone can become a solar engineer.

Through producing easily repairable solar lights with locally available parts, Liter of Light increases communities' self-reliance by integrating a livelihood model with the capacity to quickly assemble lights rather than diverting almost 70 percent of production costs on logistics from overseas. Our solar products are currently built and assembled at about 1/3 of the present cost of other products on the market. Even with this lower cost, about 20% is retained as a livelihood. The output produced will be given to the village, and more importantly, knowledge will be transferred so that the community can maintain and repair their units once the Liter of Light team leaves.

Liter of Light has inspired and empowered young people in the Philippines and in other countries to be able to take part in reducing energy poverty. By making assembly and installation of solar lighting affordable with daylights and easily built micro-solar house lights and street lights, this has allowed small women's cooperatives, people with disabilities, and community organizers to be part of the solution and not just left in the dark.

THE CHALLENGE

Over one billion people around the world do not have access to clean and sustainable energy. Most proposed solutions bring technologies to energy-poor communities through top-down approaches, importing consumer models without turning over skills or ways to repair the technology, with at least 70% of production costs spent on logistics. When batteries or parts fail, it is too expensive or difficult to get repairs done, and most are left to deteriorate.

THE RESULTS

Through social media and community replication, our movement has spread, with **over 752,000 lights brightening the lives of thousands of households and communities in over 15 countries.** This allows multiple groups and teams to work simultaneously to light up as many areas and communities as possible. With all of the Liter of Light chapters around the world, we are also able to spread information about the cause, as well as the many benefits and strengths of using solar energy and solar lights. Our followers in our social media campaigns and promotions have continued to grow, allowing us to easily get in touch with people from all around the world. This allows people to instantly contact us when they have inquiries, when they have proposals for projects, and when they have referrals for communities where we can install lights. This is a grassroots international approach that makes Liter of Light accessible for everyone everywhere.



Meri Toksave



Organisation: Meri Toksave

Founder: Ayesha Lutschini, Tasman Bain, Courtney Price

Year established: 2013

Place of Establishment: Brisbane, Australia

Place(s) of Operation: Papua New Guinea and Australia

Budget: \$5000 - \$25, 000

Contact: t.bain@meritoksave.org

Find out more at: <https://meritoksave.org/>

THE CHALLENGE

Violence against women is a profound violation of human rights that exists in societies around the world. In Papua New Guinea, a small Pacific island country comprised of over 800 distinctive languages with a population of over 7 million that ranks towards the lowest of the Human Development Index, women face one of the highest rates of domestic and sexual violence in the world. **70 percent of women are survivors of violence in Papua New Guinea, and in the Chimbu and Western Highlands provinces almost 100 percent of women are survivors of violence.** Although, it is impossible to provide a completely accurate estimate of the rate due to incomplete data and reporting asymmetries, the situation of violence against women in Papua New Guinea has been described as an ongoing humanitarian crisis and unique outside a war-zone.

A key barrier and problem for women and survivors of domestic, family and sexual violence is the inaccessibility and invisibility of contact information for emergency and support services. Indeed, inaccessible and invisible services is a profound barrier for help-seeking which leads women unable to receive adequate support or referrals to adequate services.

THE SOLUTION

Meri Toksave ("information for women" loosely translated in Tok Pisin) is a youth-led NGO which designs and delivers programmes and partnerships for the **advocacy of women's rights and gender equality, the empowerment of women and girls, and the prevention and elimination of domestic, family and sexual violence in Papua New Guinea.** The organisation specialises in monitoring, verifying and improving the information asymmetries and inaccessibility of cross-sectoral emergency and support services and referral systems for women and survivors of violence throughout Papua New Guinea. Their first and principal project focuses on overcoming the inaccessibility and invisibility of contact information for emergency and support services. It tackled this through the creation of the first and only nation-wide "Directory of Emergency Services for Those Affected by Family and Sexual Violence". The directory was successfully compiled and verified throughout 2013 and launched and distributed throughout 2014 via partnerships with leading international and local organisations.

Meri Toksave further works to advocate for women's rights and to challenge existing attitudes, behaviours, stigmas and misinformation on violence and abuse across Papua New Guinea, Australia and the broader Pacific Islands region. It holds community and fundraising events in Australia to raise the profile and awareness of the plight of women in Papua New Guinea, working with the PNG community in Australia and a range of other NGOs, universities and youth organisations in Australia.

GROWTH & EXPANSION

The current organisational scale of Meri Toksave is that of 10 individuals based across Brisbane and Port Moresby. Our principal project, the Meri Toksave Directory, is a living and ongoing project with currently 5000 hard copies in circulation and distributed to organisations throughout Papua New Guinea. Regarding growth, we are seeking to expand the impact of the Meri Toksave Directory through the distribution of another 5000 hard copies in Tok Pisin alongside the development of a more compact and discrete prototype of the directory. Alongside the hard copies, there is a perpetually verified and updated online living directory which is accessible to our partner organisations and the general community in Papua New Guinea.



My Captain

Organisation: The Climber

Founder: The Climber, CEO

Year established: 2013

Place of Establishment: India

Place(s) of Operation: Bangalore, Delhi, Chennai, Vishakapatnam, Trichy, Vellore, Nagpur, Manipal

Budget: \$5000 - \$25, 000

Contact: sameer.theclimber@gmail.com

Find out more at: <http://www.mycaptain.in/>
<http://www.theclimber.in/>

THE CHALLENGE

Unemployment of graduates is a major challenge facing many developing Asian countries today. The Economist Intelligence Unit Report for the British Council (Jan 2014) identifies the causes for unemployment of graduates, chief among which is unemployability- the gap between skills students possess and what employers want. Perusing the report, it can be seen that in each nation there is an overwhelming preference for certain streams of education. This corroborated with personal observations that students are forced into streams regardless of their individual interests and aptitudes thereby, aggravating the problem.

Further, multiple studies from across the globe all point to the fact that underemployment, which is widely prevalent amongst graduate youth, has negative connotations to the mental health of both the individual and community. 'Underemployment is associated with decrease in self-esteem, increased alcohol abuse and elevated rates of depression' (Dooley & Prause, 2004).

Hence, instead of bandaging over the issue by training the graduates to meet market demands for what are essentially underpaid and unsatisfying jobs, it is necessary to help them maximise their potential through self-discovery and focus on following their skills and interests.

THE SOLUTION

'My Captain' a project, under the startup- 'The Climber' is **an online platform for students, poised for university education or who have just joined as freshmen, to experience a field before entering it.** Captains, undergraduates, who will soon be amongst the best in their fields, conduct online workshops where they interact with small groups of students to help develop their skills and also show guide them on how to transform their passions into careers. Students also get hands-on experience by working on live-projects with their Captains. This environment of highly interactive learning, drives students to choose the field they are truly passionate about and are best at.

Not tethered geographically, My Captain can be the one platform where collaborative efforts between students can help reduce unemployment significantly. In the long run, My Captain will enable students from different nations to share ideas, learn new skills and not only become employable, but instead become entrepreneurs who can solve the issues their societies face and generate employment for others.

MyCaptain at it's core and most basic level aids and assists young students make more informed choices and gives them the required information, assurance and experience to follow their passions. MyCaptain further helps build a strong community of students all passionate about the same fields and enables them to interact and share ideas and make progress in their fields. And this further improves their skills in the fields, making them more employable, and also more qualified to tackle problems they face at a local, or even national level.

THE RESULTS

The Climber has impacted over 17000 students in India in 40 schools, 6 colleges across 9 cities. We have connected and mentored over 1800 students through our online mentoring program, MyCaptain.

Our events have brought successful young professionals in contact with students who look up to them and they get to interact personally with them and guide them on taking the right steps forward.

Nature for the Blind

Organisation: Nature For All

Founder: Evan Barnard

Year established: 2014

Place of Establishment: Georgia, United States of America

Place(s) of Operation: Georgia, United States of America

Budget: \$0 - \$5000

Contact: evan.c.barnard@gmail.com

Find out more at: <http://www.naturefortheblind.com>

THE SOLUTION

Since 2007, I visited hundreds of schools to talk about mangroves conservation and invited them for planting. We met fisherwomen and trained them in backyard nurseries. We organized meetings for GIS mapping of mangrove boundaries in each village, and our team organized field trips into mangrove forests for young people from the community. In 2011, we set up our own Marine Environmental education centre, which is now equipped with a museum, laboratory, mangrove nursery, women skill development unit, student meeting hall, solar cookers, weather station and educational materials. This community centre is being managed by local people and continuously visited by women, youth and NGOs for trainings, workshops and field education trips.

THE CHALLENGE

Navigating the outdoors is especially challenging for the visually impaired, and Braille trails and sensory gardens offer sustainable and accessible ways for them to safely experience the outdoors and interact with nature. Support to create these trails and gardens can be difficult as communities face diverse needs. Funding is a concern, but much of what is needed to establish these trails and gardens can be built with donated materials and volunteers. Community leadership needs information on the low cost associated with construction and funding opportunities to increase public support for these projects. Braille trails and sensory gardens can be used by communities, schools and training programs as opportunities for teaching and learning, science education, and community events such as nature walks. Public support of these projects can play a key role in establishing inclusive communities around the world.



THE RESULTS

There have been a number of nature walks held for groups of visually impaired individuals on the trails I have worked on. The walks I have led ranged from five to twenty five visually or physically impaired individuals on the trail at a time. Some Braille trails keep specific data on all visitors, and can range from dozens to thousands per month or year depending on the trail location. Others do not have specific numbers, so the trail is used by many people with and without disabilities.

One Sun Health



Organisation: One Sun Health LLC

Founder: Katie Guidera, Sarah Cox, Molly Simon

Year established: 2012

Place of Establishment: HaMakuya, Limpopo Province, South Africa

Place(s) of Operation: South Africa

Budget: \$5000 - \$25,000

Contact: kguidera@onesunhealth.org

Find out more at: <http://www.onesunhealth.org/>

THE CHALLENGE

In 2015, nearly half of the world's population was at risk of malaria, with 214 million cases and 438,000 deaths globally. Malaria is preventable and treatable, yet remains the most prevalent parasitic endemic disease in Africa. Currently, Sub-Saharan Africa's malaria burden is disproportionately high, with 89% of all malaria cases and 91% of deaths occurring in this region in 2015.

An estimated 10% of the South African population lives at risk of contracting malaria within three malaria-endemic provinces: Limpopo, Mpumalanga, and KwaZulu-Natal. Although South Africa has achieved and exceeded the UN Millennium Goals for malaria control, the Limpopo Province recorded the lowest reduction in malaria cases compared to other malaria endemic provinces within the country between 2000 and 2010.

THE SOLUTION

One Sun Health aims to engage a collaborative network of partners with local knowledge and resources to develop creative solutions to improve physical, social, and economic health in South Africa.

One Sun Health's innovative work is driven by the concept of building sustainability and leadership from a network of existing community resources that share a commitment to skill development and identifying solutions to meet critical public health needs.

In 2012, One Sun Health launched the Malaria Awareness Program, a series of interactive educational workshops led by community health workers and held at the tribal leaders' homes in various villages. Shortly afterwards, it also launched ENETI, a social enterprise initiative that aims to create pathways of economic empowerment by starting bed net businesses in rural communities. These small businesses partner with a South African bed net company to ensure a steady market and organize logistics of training, material transport, and more.



THE RESULTS

The Malaria Awareness Program has trained over 60 community health workers who have led education workshops with over 1,063 community participants. The program includes data collection and a monitoring and evaluation component, which is facilitated by university students each year. Workshops have contributed to measurable improvements in community knowledge and awareness of malaria transmission, prevention, symptoms, and treatment. Surveys of over 700 participants have demonstrated a 11.2% and 12.9% increase in the number of participants who cite methods deemed correct for transmission and prevention of malaria, respectively.

Since 2013, ENETI has trained 10 women and men who lead two local sewing cooperatives. These individuals have participated in three in-person training sessions, each lasting 2-3 days, where they have learned to produce high-quality mosquito bed nets and been trained in basic business principles. Through ENETI, over 420 bed nets have been produced and sold to date.



OpenShkola

Organisation: Open School of Sustainable Development

Founder: Nelya Rakhimova

Year established: 2013

Place of Establishment: Russia

Place(s) of Operation: Russia and Russian speaking countries/audience

Budget: \$50, 000 - \$100, 000

Contact: rakhimova@openshkola.org

Find out more at: <http://www.openshkola.org/>

THE SOLUTION

We are a team of young activists who believe that education is a basis for the global changes. **We educate Russian-speaking audience about sustainability issues and want to reach as many people as possible through online non-formal education.** We provide our service through a webpage where people can access free online courses. We provide free webinars sessions where we invite different specialists once a month.

We are targeting youth and young professionals in different parts of the world who speak Russian and can apply their knowledge in their daily life. With our projects they can learn about global issues and how daily choice can influence the environment and society of the planet. We had some young educators among our students who applied this knowledge for their teaching practice. We are planning to develop at least one course for educators about how to teach sustainability to children.

THE CHALLENGE

Sustainability is one of the main discussed topics at the high-level meetings. Unfortunately, **Russian-speaking people in the CIS and other countries are not really aware about it as there is a lot of misleading and lack of proper information.** This lack also leads to limited integration to global processes and believe in misleading ideas. We educate Russian-speaking audience in non-formal way using online courses and webinars, and prospectively organize live events.

GROWTH & EXPANSION

Already this year we are planning to do following things:

1. Introduce the second course on SDGs for the broad audience with partnership of Russian MOOC platform "Lectorium" <https://www.lectorium.tv/>
2. Start the implementation of a marketing strategy for promoting SDSN among Russian universities increasing the visibility of our project as regional coordinator
3. Involve more students in translation of SDSN materials as well as production of our own materials on sustainable development
4. If funding is available: development of educational materials for schools, universities, local municipalities - fundraising is in process
5. Continue organizing free webinars, providing materials through social media

THE RESULTS

2015 - 2016: First online course has been developed informing about the sustainable development concept and its practical application. 870 people registered for the first course. Secondary school teachers who completed the course informed that they use course materials in their classrooms and their readiness to receive additional materials for the teaching basics of sustainable development in secondary schools. The project coordinated translation of the materials for UN "Sustainable Development Solutions Network" in Russian involving students of Russian universities. Students received appreciation letters from the organization of the course creator. The organization has been adopted as the Sustainable Development Solutions Network official member of the network.

2013 - 2014: Three online courses have been conducted with the assistance of Russian experts in the field of environmental protection, as well as economic and social development. The courses have attracted the attention of about 500 people who have taken an active part in online webinars.

Open Source Laboratory Information System Implementation

Organisation: Universal Support Systems Implementers

Founder: Philip Boakye, CEO

Year established: 2014

Place of Establishment: Georgia Institute of Technology, USA, Atlanta and Ghana

Place(s) of Operation: All over Ghana

Budget: \$0 - \$5000

Contact: philipboakye@ss-implementers.org

Find out more at: <http://www.ss-implementers.org/>

THE SOLUTION

The solution was formed out of the Computing for Good (C4G) open source Laboratory Information System project, funded by the Center for Disease Control and Prevention (CDC) in 2011. **Basic Laboratory Information System (BLIS), an open source laboratory information system (LIS) has been successfully implemented in Ghana to improve patient specimens and laboratory results data quality, timeliness, and increase laboratory efficiency.**

Components Include: One-time entry of each unique patient - standardization of data collected - customization to a country's/facility's needs - ability to track lab supplies such as test kits, reagents - ability to run reports as specified by a country's/facility's - daily logs to be reviewed for data verification - simple data backup - barcode generation and recognition - interface with other specific information systems - instrument interfacing - DHIMS2 interfacing

Activities Include: Pre-implementation Survey; Site Sensitization; Installation and configurations; Training of laboratory staff; On-site technical support; Remote technical support; Feedback and Reporting; Post implementation survey to assess impact.

We aim to implement it in all public and private laboratories with electronic laboratory information system. There is potential for expansion as it was tested in 3 sites and has been rolled out to 14 sites.

THE CHALLENGE

Accurate and reliable clinical laboratory test results are a critical component of a public health approach to disease management. Laboratory data are essential for clinicians to accurately assess the status of patients' health, make accurate diagnoses, formulate treatment plans, and subsequently monitor the effects of treatment. **However, in the majority of PEPFAR-supported laboratories, clinical laboratory data is generally not stored in a manner in which it can be easily accessed, summarized, or analyzed.** Moreover, these data are generally recorded in multiple, non-standardized, and often somewhat illegible log books, which presents a significant challenge to any efforts to conduct analyses or reporting.

THE RESULTS

The results are measured by comparing Pre-implementation Survey data to Post implementation survey data to assess impact. BLIS has been implemented in 17 sites across the country. The pre and post assessments showed that time required for patient/specimen registration reduced from 2.10 minutes to 0.50 minutes whilst error rates reduced from an average of 18 per week to 4 per week. The number of patients captured into BLIS increased from 102 to 136 per day. Weekly surveys demonstrated that waiting time for patients and clinicians was reduced, and test reports were more legible and standardized than hand written ones. A total of 120 laboratory staff were directly trained on BLIS. On average, it cost approximately \$13,000 for implementation at one site.

Play it On



Organisation: Play it On

Founder: Johan Juul Jensen

Year established: 2014

Place of Establishment: Uganda and Denmark

Place(s) of Operation: Uganda, Tanzania, Kenya, Togo, Kenya, Ghana, Rwanda, United States, Denmark, Germany

Budget: \$5000 - \$25,000

Contact: info@playiton.dk

Find out more at: <http://www.playiton.net/>

THE CHALLENGE

1) Intercultural Understanding

The number of tourists and travelers keeps on increasing. However, at the same time many tourists express frustration that they never get "under the skin" of the visiting country. Play it On facilitates a unique experience where travelers have the opportunity to get to meet local kids and vice versa.

2) Right to Play

Every child has the right to play. It is not only a legal right, as by article 31 in the convention on the right of the child but also a moral one.

3) Recycling and Sustainability

Across the western world sports teams are discarding high-quality sports equipment every year due to a new sponsorship agreement. Most of this equipment gets thrown out. We recycle it and make sure it gets in the hands of kids who need it!

THE RESULTS

Play it On has reached 10,000 kids and supported their right to play. They have recycled 350 team sets of football equipment, meaning close to 9000 individual pieces of clothing. They hosted cultural exchanges that have improved the intercultural understanding of upwards of 1500 people. They have increased participation rates at their partner organizations programs.

THE SOLUTION

At Play it On we attempt to bridge cultural barriers, we reduce waste society by recycling high-quality clothing and improve children's conditions to play. The Play it On Football Exchanges leverage the fact that Danish, German and American soccer clubs use and discard equipment every single season. Play it On then collects the equipment, and connects with travellers, planning to visit either: Uganda, Tanzania, Kenya, Togo, Kenya, Ghana or Rwanda. Many travellers today express frustration, of having a hard time connecting with locals and experiencing real life and not only national parks. Play it On solves this for them, by setting them up with a sports event in the country they are visiting. Soccer is an amazing tool to break down cultural and socio-economic barriers, after having played a game together, tourists will have a better opportunity to meet and understand the local kids and vice versa. In return for participating in the game the local school or soccer team, receives a donated set of football equipment in return.



Smarter Harare through Participatory E-inclusion (SHAPE)

Organisation: Development Reality Institute (DRI)

Founder: O'Brien Makore, Programs Coordinator

Year established: 2015

Place of Establishment: Harare, Zimbabwe

Place(s) of Operation: Harare, Zimbabwe

Budget: \$100, 000 - \$250, 000

Contact: omakore@driafrica.org

Find out more at: <http://harareyangu.org>

THE SOLUTION

The SHAPE project was conceptualised with the idea to bridge the gap which was existing between Harare residents and their municipality due to mis-trust. The residents were blaming the municipality for misusing their funds, while the municipality was blaming the residents for not paying their rates resulting in poor social service delivery affecting the quality of urban life.

To ensure transparency and effective participation of all stakeholders in city affairs, we developed a budget tracking mobile application which also enables residents to share their views with the municipality in real-time. To buttress this, we also established the first-ever Local Urban Observatory to help the municipality respond effectively and prioritise to the needs of the citizens.

The project is now 18 months old, and in its transition from a pilot project to full-fledged project. The projects operates in Harare's 46 wards, and intended to be up-scaled in other cities in Zimbabwe in 2017.

THE CHALLENGE

For cities to be sustainable and inclusive, citizen participation and transparency in the utilisation of funds are critical pillars towards that. The SHAPE project then becomes very relevant as it is one tool which aims to ensure transparency and effective citizen participation in city affairs.

More so, it enables all city stakeholders to share ideas on how to transform Harare into a world class city by 2025 as per the municipality's vision.

THE RESULTS

To date the project has achieved the following successes:

- For the first time in history, the municipality of Harare now conduct online pre-budget consultative meetings;
- The municipality established a GIS department as an aiding department to city planning;
- Service delivery improved slightly as witnessed by frequency in waste collection, re-surfacing of roads;
- Some parallel municipal budgets were unearthed;
- Improvement in citizen participation in city affairs;
- Harare now on the global city indicators forum.



Social Entrepreneurship for Quality Education



Organisation: Maya Universe Academy

Founder: Manjil Rana, Chairman/Principal

Year established: 2011

Place of Establishment: Nepal

Place(s) of Operation:

Udhin Dhunga, Byas -4, Byas Tanahun, Nepal
Aapswora, Byas Tanahun, Nepal
Malbase, Gaighat, Udaypur, Nepal

Budget: \$50, 000 - \$100, 000

Contact: mayauniverseacademynepal@gmail.com

Find out more at:

<http://www.mayauniverseacademy.org/>

THE SOLUTION

Maya Universe Academy (MUA) was formed by a group of young (at that time 22-24) friends who studied abroad. Their objective was and still is **to provide better quality education and increase access to it in poor rural communities** where the only option of education is public, which is of poor quality.

The parents of students pay with their time instead of money. They volunteer twice monthly in agriculture, animal husbandry, handicrafts and others. These activities help MUA become sustainable. Nowadays, parents can also opt to farm chickens in the space of their homes for MUA which are sold into markets. From these chickens that they raise, parents will also get an income and have their children educated.

Foreign volunteers support local employed teachers to ensure students are exposed to international learning, better fluency in English and project based learning.

THE CHALLENGE

In 2015, over 60% of students in public schools are still failing their SCL (School Leaving Certificate) Examination. Two-thirds of children in Nepal attend Public schools and out of the 1.4 million enrolled in public schools 2005, 70% dropped out by 2015.

Over the years, Nepal has faced mass migration out of the villages and out of country, leaving less skilled workers in the poor communities. Private schools do not want to enter rural areas because there is "no money", and families of students do not have sufficient income to send their children to private schooling in the urban areas.

THE RESULTS

MUA currently educates over 450 students in 3 locations. Every year it increases in number of students, number of employed local staff and number of additional volunteers.

The vision is to **reach as many rural communities with quality education as possible offering this labour exchange instead of money.** The profits earned from the social businesses will contribute to MUA's expansion.

- Number of volunteers: +250 p/a
- Employment opportunities: +40 employees



Solar Lights Project



Organisation: Solar for Life

Founder: Kourosh Houshmand/ Filip Susic

Year established: 2013

Place of Establishment: Canada

Place(s) of Operation: South Africa, Kenya, Myanmar

Budget: \$50,000 - \$100,000

Contact: kourosh@solarforlife.ca

Find out more at: <http://www.solarforlife.org>

THE SOLUTION

Solar for Life subsidizes the cost for entrepreneurs in local communities to purchase portable solar lights.

Micro-entrepreneurs who purchase the solar lights sell the solar lights to their local community members, often times in local spaces. The entrepreneurs make a profit, and are able to purchase more solar lights from us at cost -- this is how we sustain our operations. Concurrently, we work with local non-profits and educational institutions to hold educational sessions in communities where the solar lights are sold in order to educate local community members of the benefits of portable solar lights in comparison to kerosene lights. Moreover, Solar for Life donates solar lights to local events in communities in which the solar lights are being sold in order to promote the adoption of portable solar lights. Solar for Life partners with trusted local non-profits and educational institutions to delegate responsibility and complete deliverables in our physical absence, such as holding educational sessions, promoting portable solar lights by showcasing them at local community events, and distribute lights to micro-entrepreneurs.

THE CHALLENGE

According to the World Health Organization, kerosene lamps are necessary to replace due to the harm they pose as a health detriment, fire hazard, and environmental threat. Firstly, kerosene lamps are deemed by UNEP to be an important source of household air pollution. Secondly, kerosene lamps are dangerous because they serve as a fire hazard. Thirdly, kerosene lamps are a major contributor to climate change. Kerosene lamps produce approximately 3% of global black carbon emissions, making them a noteworthy individual source of greenhouse gases.

THE RESULTS

Solar for Life has done work in Kenya, Myanmar and has launched independent projects in the Kwazulu-Natal region of South Africa, raising almost \$100,000 CAD. In 2015, Canadian Geographic named Solar for Life as one of six national recipients of the 'Climate Hero' Award for innovation in sustainability. We have been sponsored by CanSIA (Canadian Solar Association) and have been recognized by the BBC for our approach to student-led social innovation.





Sustainability Hub Model

Organisation: rootAbility

Founder: Multiple students were involved in developing the solution.

Year established: 2010

Place of Establishment: Maastricht University, The Netherlands

Place(s) of Operation: Netherlands, Germany, Belgium, UK, Sweden and Italy

Budget: \$25, 000 - \$50, 000

Contact: Felix.Spira@rootability.com

THE SOLUTION

The Sustainability Hub is a platform that connects, empowers and supports initiatives of students, staff and faculty to realise solutions to the Sustainable Development Goals at a university. The SDGs that each hub focuses on depend on the specific context of each university. In high-income countries in Europe, the focus so far has mainly been on goals like climate change mitigation, education for sustainable development as well as responsible consumption and production.

The vision is that action is taken through a whole institution approach, focusing on education, research, operations, community and governance: A hub runs its own activities, such as lecture series on climate change, energy savings campaigns, lobbying for sustainability policies and writing sustainability reports. A hub also supports students, staff and faculty in their initiatives, through training, micro-grants, visibility on the website,

THE CHALLENGE

Six to seven billion young people will go through secondary school in Africa between today and the end of the century, and families all over the continent will invest huge resources to give those children an education. But education systems across Africa deliver a broken promise—spending years in schools that don't teach the skills youth actually need does not lead to employment or the opportunity to make a decent living. For the families who have invested so much to put their children through school and improve their lives, this broken promise is tragic. For the countries that depend on today's youth to solve poverty and drive development, it is a massive lost opportunity.



THE RESULTS

Maastricht University Green Office is the Sustainability Hub that has been researched the most. Its achievements in operations include:

- The team successfully lobbied for an increase in the supply of organic food in the cafeteria from 5% to 15%
- A recycling initiative led to an increase of recycled electronic waste by 125%
- Solar cells were installed on all university rooftops where this is technically and legally feasible
- The purchase of green electricity certificates with Dutch windpower as a source of origin increased from 10% to 100%.

In 2015, our efforts were recognized by the UNESCO-Japan Prize on Education for Sustainable Development, as well as a recognition of the German Advisory Council on Sustainable Development as one of the 100 most innovative sustainability initiatives in Germany. rootAbility is also part of the UNESCO Partner Network to help implement the Global Action Programme on Education for Sustainable Development.

Sustainability Oceans Alliance

Organisation: Sustainable Oceans Alliance

Founder: Daniela Fernandez

Year established: 2014

Place of Establishment: Washington, D.C.

Place(s) of Operation: Georgetown University (founding location), Stanford University, George Washington University, American University, Oxford University, Morgan State University, Ohio State University, Columbia University, Wesleyan University, Center College

Budget: \$25, 000 - \$50, 000

Contact: df583@georgetown.edu

Find out more at: <http://www.soalliance.org>

THE SOLUTION

The Sustainable Oceans Alliance (SOA), hosted the first ever Sustainable Oceans Summit on April 25, 2015. The summit attracted over 500 students from across the country and in collaboration with the U.S. State Department, an additional 1,000 millennials tuned in via a webcast from U.S. embassies across the world. At the conclusion of the summit, a petition was launched asking world leaders to make ocean sustainability a priority when voting to renew the UN Sustainable Development Goals (SDG). The petition received over 15,000 signatures from millennials across the globe and it was presented to UN Secretary General, Ban Ki Moon at the SDG General Assembly meeting.

The key components of the Sustainable Oceans Alliance are its university chapters and its global summits. Students that are interested in starting an SOA chapter in their university receive a "chapter guide" and the full support and mentorship of SOA. University chapters are encouraged to organize the following activities: (i) Host speaker events on campus; (ii) Design new ocean-related curriculum for their university; (iii) Plan ocean-clean up spring break trips; (iv) Advocate for local ocean policy change (petitions/lobby); (v) Prepare to bring members to the annual Sustainable Oceans Summit.

THE CHALLENGE

"By the year 2050, all global fisheries will collapse" was the phrase that became ingrained in my mind after attending a UN meeting in New York. At this meeting I realized that I was the only young person in the room becoming aware of the immense responsibility that my generation is inheriting. Although heads of state, ambassadors, scientists and NGO leaders surrounded me, there was no communication outlet informing the general public about the economic, social and political repercussions that come with a decaying ocean.

THE RESULTS

This solution is projected to scale globally. Our current goals are to be in 25 universities by the end of 2016, 80 universities by 2017, and 200 by 2018.

Currently, SOA has already hosted the 2nd Annual Sustainable Oceans Summit attracting over 3,000 participants and is mentoring 8 other university chapters across the world.





Student Energy

Organisation: Student Energy

Founder: Meredith Adler (Current ED) & Janice Tran, Kali Taylor and Sean Collins (Founders)

Year established: 2009

Place(s) of Operation: The organization has held summits in Canada, Norway, Indonesia, Mexico, Scotland, South Africa, and the United States. We currently have chapters in England, Canada and Nigeria. Student Energy's headquarters are currently in Calgary, Canada.

Budget: \$250, 000 - \$500, 000

Contact: meredith@studentenergy.org

Find out more at: <https://www.studentenergy.org/>

THE SOLUTION

Student Energy is a global charity creating the next generation of energy leaders who will accelerate our transition to a sustainable energy future. The movement began with a simple idea, to run an energy conference that was "for students by students." Since then, we have continued to run innovative programming, developed "for students by students" that empowers young people to shape our energy future. We have continued the summits which have gone to every continent and doubled in size and impact. We have also launched interactive digital energy literacy programs and university-based chapters that empower youth to take action on energy in their communities.

University students around the world are the primary beneficiaries of our programs. With our Energy Literacy Platform and digital engagement work anyone who wants to learn about and understand the energy system now has an easy access point to do so. We have seen our materials used by everyone from primary school teachers to large-scale companies.



THE CHALLENGE

Our primary focus is on creating a space for youth to have a voice, and pursue their ideas and innovations on energy. This began with our International Student Energy Summit (SES). While attending SES our delegates often report it is the first time people "have wanted to hear their ideas," or realized that the solutions they are working on could shape the future of energy. This space to be innovators and leaders, as well as the motivation that comes from being connected with like-minded students from around the globe launches delegates to new heights and inspires them to take on some of the greatest challenges the energy system has to offer. Once young people know they can make a change, the next major challenge is finding an accessible entry point to begin to learn about the energy system. For us, this was a crucial problem to solve because you can't change something you don't understand.

GROWTH & EXPANSION

Student Energy has empowered hundreds of young people to become energy entrepreneurs or intrapreneurs through our programs.

There is a tremendous opportunity for growth in all of our programs. Each year the demand for our programs become larger as more and more youth look for opportunities to shape the future of energy. Over the next five years, we expect to see the largest amount of growth in our chapter program as we believe that people learning to take action on energy and enrich their communities is the most effective way to maximize our impact.

The Educate! Experience

Organisation: Educate!

Founder: Boris Bulayev, Eric Glustrom and Angelica Towne, Co-founders

Year established: 2005

Place of Establishment: Uganda

Place(s) of Operation: Uganda, Rwanda

Budget: \$250, 000 - \$500, 000

Contact: Boris@experienceeducate.org

Find out more at: <http://experienceeducate.org/>

THE CHALLENGE

Six to seven billion young people will go through secondary school in Africa between today and the end of the century, and families all over the continent will invest huge resources to give those children an education. But education systems across Africa deliver a broken promise—spending years in schools that don't teach the skills youth actually need does not lead to employment or the opportunity to make a decent living. For the families who have invested so much to put their children through school and improve their lives, this broken promise is tragic. For the countries that depend on today's youth to solve poverty and drive development, it is a massive lost opportunity.

THE RESULTS

Educate! is most proud of our model's impact, especially given our cost-effectiveness. Results from a Randomized Controlled Trial (RCT) in Uganda show that students who completed our program earned more than twice as much as their peers (an average of \$338/year compared to \$165/year) and the effect on girls was even larger: a \$200 and 120% income increase over the control group. The RCT also showed that our students are 64% more likely to start businesses as the result of our program, compared to a control group. Girls again showed an even greater effect—our female graduates were 152% more likely than girls in the control group to own a business. The RCT also showed a 123% percent increase in leadership initiative (208% for girls).

THE SOLUTION

Educate!'s flagship program, **The Educate! Experience**, is designed to equip students with the skills to solve poverty for themselves and their communities. We deliver our practical, skills-based model of education by partnering with existing secondary schools. The program model is driven by the amazing people involved, the students, mentors, and teachers in these partner schools. Educate! Mentors are carefully selected and intensively trained team members from the local community who have practical experience running their own businesses and community projects. The Educate! Mentor delivers our training, mentorship, and student business support through weekly lessons to 40 Educate! Scholars at each partner school over the course of a year and a half. Educate! also selects one teacher and one administrator per school to join our Experience Association to build a community of practice and learning around skills-based education within each school. Educate! Associate Teachers introduce global best practices in their own classrooms, and lead school-wide components of our program, such as Student Business Clubs, peer mentorship events, and community service days.





The GREEN Program

Organisation: The GREEN Program

Founder: Melissa Lee, CEO

Year established: 2009

Place of Establishment: Rutgers University - New Brunswick (New Brunswick, New Jersey)

Place(s) of Operation: Iceland, Peru, Philadelphia

Budget: \$250, 000 - \$500, 000

Contact: melissa@thegreenprogram.com

Find out more at: <http://www.thegreenprogram.com/>

THE SOLUTION

Created for students, by students, The GREEN Program has introduced a new model for education abroad. Our accredited, short-term model focuses on **bringing transformative experiences to students around the world and unlocking doors to governmental, public, and private facility access, exclusive tours, and unique bucket-list experiences around the world.** We are working with universities around the world to redefine what a classroom should mean - from lecture halls to studying climate change effects on the top of our world's glaciers.

As commitment partners to the United Nations 17 Sustainable Development Goals, The GREEN Program exposes students to the heart and guts of these sustainability challenges and initiatives.

THE CHALLENGE

The GREEN Program addresses the experience gap between traditional university setting and career placement. **We are now living in a world where our next generation's leaders will need to be educated and trained for a workforce dedicated to a more sustainable future.** Our solution towards this is bringing university students to the heart and guts of sustainable development with our short-term, accredited, experiential education model. We exist to give purpose and meaning to education, adventure, and life.



THE RESULTS

- Ranked #1 "Top Summer Study Abroad Program" in 2015 by StudyAbroad101: Ranked by student reviews
- 99% of GREEN Alumni say that The GREEN Program has refined their purpose: professionally, personally, academically: Alumni Poll
- Four in five GREEN Alumni say that employers have asked about their GREEN experience during a job interview: Alumni Poll
- 91% of GREEN Alumni stay connected with our global alumni community for mentorship, jobs, industry news, travel, and more: Alumni Poll
- 95% of GREEN Alumni stay involved in sustainability efforts after their GREEN program: Alumni Poll



Wintervacht

Organisation: Wintervacht

Founder: Yoni van Oorsouw and Manon van Hoeckel,
Owners/Designers

Year established: 2013

Place of Establishment: Oss, Brabant in The Netherlands

Place(s) of Operation: The "operation" started during our studies in Oss, Brabant, Two years ago we expanded to an atelier in the capital of the Netherlands, Amsterdam.

Budget: \$0 - \$5000

Contact: info@wintervacht.nl

Find out more at: <http://www.wintervacht.nl/>

THE SOLUTION

Wintervacht inspires to transform old materials into contemporary design items, giving new life to textiles that have lost their original purpose. Founders Yoni and Manon took, next to their studies, sewing classes from Yoni her mom. At that time Manon lived in a house without any heating so she used to sleep under old woolen blankets. In the winter of 2012 Yoni's mom suggested to make a coat for Manon, which inspired her to use the woolen blankets.

To guarantee the high quality Wintervacht stands for, all the blankets are sorted by hand, one by one.

"At Wintervacht we create pieces that are made to last beyond the season and its trends. We work with a permanent collection where we add a new item every year. The coats are a combination of prints and colors in a timeless design. We focus on the fit and details. We also add instructions for the maintenance of the coat.

The blankets are not an inexhaustible source, therefore we are always on the look for new materials and innovative techniques that we can use in the future."

THE RESULTS

"We already produced **over 2000** coats and made a lot of people happy with a unique and functional product. These people are now wearing a more durable coat from material that otherwise probably would be pulverized or shipped overseas. Through registering our sales we know that we have contributed to a reduction of waste. Observing our growth and organic expansion we see that we get more and more attention and customers. The need for our product is increasing."

GROWTH & EXPANSION

The fundamentals of our business are set now. This gives us more space for expansion. We want to continue to innovate within our concept and focus on growth. In the future we hope to transform blankets and waste material from all over the world. We want to expand in an organic and sustainable manner. The choice for this growth is made because of our decision to become more sustainable but also because the materials are not inexhaustible.

We are open for new collaborations and projects. This could be in the form of working together with sewing workshops that provide employment for people that are not fit for the traditional labor market. Next to giving a 'new life' to materials we would also like to do this with people.



Young Forest Entrepreneur



Organisation: Reforestamos México, A.C.

Founder: José Carlos Martínez Hernández, Project Leader

Year established: 2013

Place of Establishment: Mexico

Place(s) of Operation: Mexico, Chile, Ecuador, Guatemala, Honduras, Cuba, Colombia, Costa Rica, Peru, Venezuela, and Paraguay.

Budget: \$100, 000 - \$250, 000

Contact: jc@reforestamos.org

Find out more at: <http://www.emprendedorforestal.com>

THE SOLUTION

Young Forest Entrepreneur is a contest where young people present their best enterprise ideas that will have a positive impact in their local forests. The contest selects the best proposals, and among them one, the best, is awarded with one-year support and mentoring from entrepreneurs from the field. This is intended for the winning team to consolidate its idea and develop it into an enterprise in the short to medium term.

The objective of our project is to cultivate the talent of young people by complementing their schools' curricula with training that develops entrepreneurial skills in them, such as networking, social media management, leadership, teamwork, and research. We not only believe responsible enterprises are a vehicle for wealth and wellbeing that can significantly improve human life, but also that they are a key element to protect natural areas by making sustainable use of the natural resources. Our mission is to bring knowledge and skills to as many students as possible in order for them to create responsible forest enterprises, changing thus the reality of their forests and communities for the better.

THE CHALLENGE

In Mexico, 11 million people live in forests where education is poor and health services are insufficient. Forests are extremely rich in natural resources and thus have enormous potential for economic development; however, it is where people face the biggest challenges of poverty, malnutrition, and illiteracy. These conditions make it difficult for forest owners and dwellers to manage their resources sustainably and improve their living conditions.

Forest management is one of forestry students' main responsibilities, but they lack essential abilities to do so successfully because their education is entirely focused on the technical aspect of forests and ignores other important elements.



THE RESULTS

The project ensures forestry students receive an integral education for their careers; it complements current university curricula by providing training and tools for their professional life, developing personal and entrepreneurial skills as an essential part of their education. Many universities across Latin America have recognized the results the project has generated in its three editions, and some have contacted us asking for collaboration opportunities. As a result of this, the project has grown considerably since the beginning: from 300 students and 3 mentors from Mexico in 2013, it grew to 900 students and 50 mentors from 11 countries in 2016. Our objective for next edition is to have 1100 students and 80 mentors participating from 9 countries.

Chapter 3.2

IDEAS



Artisan and Fox

Organisation: Artisan and Fox

Founder: Jaron Soh

Year established: 2015

Place of Establishment: Singapore

Place(s) of Operation: Nepal, Bangladesh,
Kenya, the Philippines

Budget: \$5000 - \$25,000

Contact: jaron@artisanandfox.com

Find out more at: <http://www.artisanandfox.com>

THE IDEA

Artisan and Fox is a for-profit social enterprise that empowers underprivileged artisans in developing nations by connecting them directly to global consumers through e-commerce.

Our mission is to empower the artisan sector in the majority world through financial upliftment and job creation. We do this by helping local nano-enterprises and micro-enterprises expand into larger artisan cooperatives through global market access.

Many global consumers desire ethically-made quality products; while many underprivileged artisans in developing countries seek fairer prices for their beautiful crafts and to expand their micro-enterprises. Artisan and Fox will facilitate this process by bridging these artisans with their discerning consumers. Our upcoming "Empower-An-Artisan" initiative is a crucial step to achieve our mission of connecting underprivileged artisans directly to global consumers.

Through a subscription model where consumers pledge directly to an artisan of their choice, we aim to eliminate artisan exploitation, extortion and help artisan enterprises expand. Our vision is to be the 'Etsy of the developing world'.

THE CHALLENGE

Artisanal work represents the second largest employer in the developing world, and the global artisan market is worth an estimated US\$32 billion a year.

Artisans are often subject to extortionate middlemen. Artisans are often unable to escape the mire of poverty. Low wages impedes them from starting their own enterprises since they cannot afford to purchase raw materials for self-production. Furthermore, many artisans cannot afford quality education for their children, and thus families are trapped in the poverty cycle for generations.

Secondly, in many developing countries, artisans are also exploited by larger entities such as sweatshops and factories, with poor labor rights and minimal wages. The artisan sector holds immense potential for lifting millions of poverty, reducing income inequality and empowering women.



THE GOAL

In two years, we hope to have empowered 10,000 artisans across the developing world. We want to have implemented financial literacy education workshops for artisan communities all across the globe, doubled the incomes of 10,000 artisans, and galvanise the expansion of local artisan micro-enterprises and nano-enterprises into full-fledged socially responsible artisan cooperatives.



Child to School

Organisation: Child to School Foundation

Founder: Chad Atanga

Year established: 2015

Place of Establishment: Taifa, Accra, Ghana

Place(s) of Operation: The project is located in Kasoa in the Central region of Ghana, the Ga west municipality of Ghana, Taifa in the Greater Accra region and the Northern part of Ghana

Budget: \$0 - \$5000

Contact: kevin@mobilizedconstruction.com

Find out more at: <http://childtoschool.org>

THE IDEA

Child to School tackles this issue of education and empowerment in three steps:

1. First, we enroll the most deprived children into schools in their local communities.
2. Second, we concentrate on the parent empowerment, by teaching the parents a trade in order to enable them have the ability to provide for the family.
3. Finally, once we realize and are convinced that the parent is in good standing financially, that is, they are able to provide the basic necessities of the family which includes those levies, we give for them to assume their responsibilities.

We monitor this by regular evaluation both at the home and the school.

THE CHALLENGE

Child to School was formed because of the dying need to solution the problem of inaccessible education to the rural poor or less deprived. Despite education being free in Ghana, it is inaccessible to the inhabitants of most of the financially less deprived communities; especially single mothers; due to levies being imposed on pupils such as examination levies and classes fees. This causes most of the children to loiter away seeking for other activities to engage in. Most of them resort to crime as a way of finding a source of income for survival.

In this era, education opens avenues for people to explore their creative abilities. This project is the medium that will help these children who receive the education provided to channel their creative processes into developing Africa and the world.



THE GOAL

We will like to see these rural communities economically empowered and all the children of school going age being enrolled in school. Thus, we want to see an improvement in the standard of living in these communities and their inhabitants.



GBV Help Map

Organisation: The Red Elephant Foundation

Founder: Kirthi Jayakumar

Year established: 2013

Place of Establishment: Chennai, India

Place(s) of Operation: Global

Budget: \$0 - \$5000

Contact: info@redelephantfoundation.org

Find out more at: <https://gbvhelpmap.crowdmap.com>

THE IDEA

I created a Gender Based Violence Help Map with resources for survivors of Gender Based Violence. I did this with the support of a team of volunteers. The crowdmap has about 5000 entries of legal, medical, resources (food, shelter, clothing), education and economic assistance, and police and ambulance hotlines listed. Each entry has been verified, and every providing organization is listed with complete contact details. This map is aimed to help women access these services without the burden of stigma or doubts as to the credibility of the providers. The idea is to help women access the facilities they need in order to escape or cope with violence without any hindrance - i.e., technology is being used to bridge the gap between need and resource by enabling access. The map is also now being expanded to include consulates that women can reach out to in order to go back to their home countries when they are being abused in a foreign country. It will also carry a separate section on resources for refugee women.

THE CHALLENGE

I spent a couple of weeks talking to women to understand the factors that could possibly hinder one's access to crisis response. Most of the obvious ones were no brainers: lack of money, lack of awareness, lack of knowledge of a foreign language if they were on foreign turf. Then came the ones that were harsh to digest. One survivor told me that she was afraid to use the browser to Google help because it left traces on the browser history – and she was always worried about forgetting to erase the entries in her nervousness. Another survivor told me that her former partner had installed spyware in her system – and she had no idea of it because it was so inconspicuous. An aid working volunteer told me that the fear came from the inability to verify the authenticity of a care provider – given the fact that many organizations are forced to cut down on number of intakes or even shut shop for want of funds, or sometimes, cut down on specific services and programs. This project aims to address access taking into account of all these factors.

THE RESULTS

We measure the results based on website stats, and number of responses received in terms of testimonies for using the map. The UN Women tweeted the map, The Population Foundation of India has tweeted the Map, Womenkind World Wide (USA) and Women's Legal Aid Centre (Tanzania) shared the map among their networks. The map has been used by Safecity (Mumbai), seventy-five police stations across the world (not at liberty to tell who/where because this is a private org tool and they are a public service), and so far, 7000 private citizens around the world. With the map, we've been able to help 593 women who reported privately that they were helped via email / WhatsApp. Going by statistics, we gather that the map is used on an average of 75-100 times every 24 hours.



Grainothèque

Organisation: ASBL Kouady

Founder: Oulai Daniel

Year established: 2015

Place of Establishment: Côte d'Ivoire

Place(s) of Operation: Rural Areas of Côte d'Ivoire

Budget: \$5000 - \$25,000

Contact: danilo_king2010@yahoo.fr

Find out more at: <http://marocenaction.com>

THE IDEA

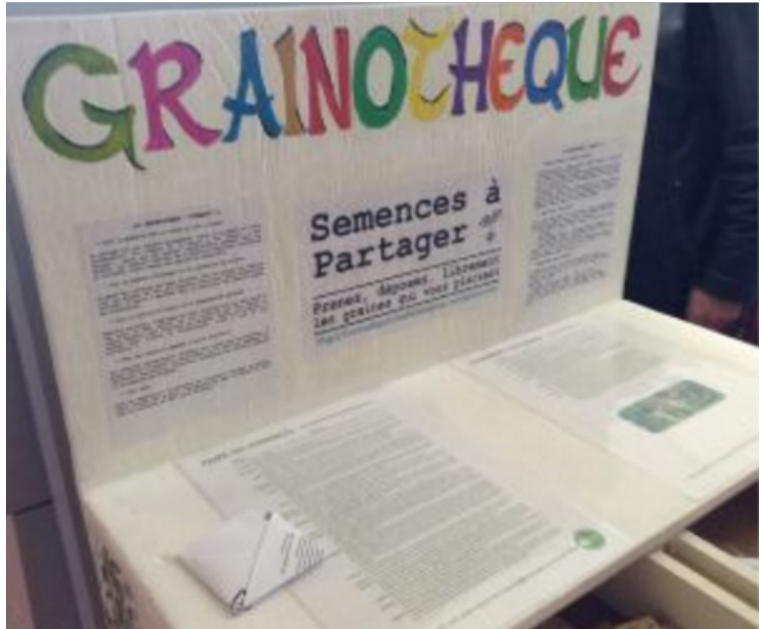
The Grainothèque is an initiative that wants to combine the protection of biodiversity and agricultural development. It is a community library that maintains reproducible seeds from a biodiverse assortment of African plants. The Grainothèque makes the seeds available to users in order to reduce the use of GMOs in agriculture. Furthermore, the Grainothèque assists farmers via an application in the fight against the harmful online sale of their production.

To sustain the project we have innovated in terms of our business model. Our business model is related to the sale and storage of reproducible seeds and the online sale of natural agricultural product. The project serves farmers by collecting agricultural products in the country and storing them for users in times of drought and low yields. We are working to duplicate the program in other locations to achieve greater impact.

THE CHALLENGE

In October 2014 during a trip to a rural area. I discovered that the mass agricultural system had destroyed 75% of plant varieties leaving more homogeneous products and making farmers dependent on GMOs. Farmers were imprisoned in the agricultural system and looking for an alternative. I decided to help by providing an answer, a credible alternative.

This project is meant to raise awareness of the causes of hunger in the world, promote sustainable family farming, guaranteeing food for all. And assist the planters thanks to its mobile application which raises awareness to the pests and diseases of vegetable plants in tropical zone.



THE GOAL

- The beneficiaries are informed about the causes of hunger and methods for promoting sustainable family farming, guaranteeing food for all;
- Library users are discovering the benefits of natural seeds for agriculture and contributing seeds and products to the library;
- The farmers are subscribing to the services of Grainothèque and the Grainothèque digital platform, which are offering them technical and personalized assistance; participants are informed about the contribution of information and communication technologies in improving small-scale agriculture.



Holy Jelly

Founder: Olga Mironenko

Year established: 2016

Place of Establishment: Moscow/Berlin

Place(s) of Operation: Planned places of operation: Indonesia, Malaysia, Thailand, Philippines

Budget: \$5000 - \$25,000

Contact: myfairplay@gmail.com

Find out more at: <http://www.hjelly.com>

THE IDEA

Holy Jelly is a marine plastic recycling start-up working to address the issue of plastics in oceans and its impact on marine life (e.g., entanglement, spread of invasive species, pollutant). The idea is to design and manufacture sustainable construction materials and furniture, and maybe other useful things, out of marine plastics in a number of coastal and island locations and also supply it as recycled regrind to manufacturers who use plastics and want to source sustainably. It will also include educational and research activities and provide volunteering opportunities for communities and anyone interested in contributing to the healthy clean oceans.

THE CHALLENGE

Marine plastics account for 95% of the marine pollution and do not biodegrade, which means that millions of tons of it will float in the ocean basically, forever. Marine mammals, birds and fish mistake it for food, dying from choking or from a stomach full of indigestible polymers. Animals and birds get entangled in abandoned nets and bags, the outcome for them being the same. Apart from that immediate effect, plastics transport invasive species across oceans, creating disturbances in fragile ecosystems, and act as a sponge, absorbing heavy metals and organic pollutants present in the water and rapidly transporting it up the food chains. The current minimum estimate of the annual volume of plastics entering our seas and oceans is 8 mln tons.



THE RESULTS

Currently, Holy Jelly has oral agreements on support and collaboration with: Parley for the Oceans, Commander Islands State Biosphere Reserve, GFZ German Research Centre for Geosciences (collaboration on remote plastics monitoring), Washington University Applied Physics Lab (participation in expeditions for research purposes), AtKisson Group.

The beneficiaries of this project are local communities, who get cheap construction materials, furniture etc. and a cleaner, healthier environment to live in, and companies, who get marine plastics regrind and can use it instead of primary plastics for production purposes.



iNuka Health Medical Insurance

Organisation: iNuka Pap

Founder: Waweru Kuria

Year established: 2016

Place of Establishment: Nairobi, Kenya

Place(s) of Operation: Kenya

Budget: \$250, 000 - \$50, 000

Contact: wawerukuria@inukapap.co.ke

THE IDEA

iNuka is a mobile saving and lending platform that partners with the Saccos to provide their members access to a convenient savings platform and instant emergency loans. This has helped Saccos increase their deposits by 30% since people can now access instant loans in case of an emergency. Saccos pay us 15% of revenue generated on the platform.

While doing these we discovered two things: (i) 35% of these loans go to cover medical emergencies; (ii) over 1000 people directly reached out to us with their name phone number and email address attempting to save money and borrow loans without being part of any Sacco. We have now opened up the platform allowing people to save and borrow loans directly without being part of any Sacco. Since we are not sharing these new revenues with any Sacco, with a user having reached \$200 in savings, we give 30% of revenue back to them in the form of free medical insurance. Not only are we the first mobile application to deliver free medical insurance, but we are changing how medical insurance is acquired by low income earners. We call the model "Save to insure".

THE CHALLENGE

Since there are no banks in rural Kenya, most people living here save their money to borrow loans through local savings and credit co-operatives (SACCOS). While these people travel for long distances to save their money in the Sacco, it takes up to 2 weeks to access a loan. As a result, people end up hiding some emergency money at home, which increases the risk of misuse and lowers their credit rating with the Saccos.

THE GOAL

We consider our mobile application in Kenya as a prototyping ground. We intend to role this out through telecoms in Africa targeting the half a billion people using mobile money wallets to transfer money. We would like to be a solution that allows people to save and borrow money on the mobile wallets, while accessing free medical insurance.

We want to reach at least 500,000 users within the first year. We currently have no data since unlike the instant loans where we have over 10,000 users, this just launched.

Moubarmij



Founder: Layal Jebran

Year established: 2014

Place of Establishment: Beirut, Lebanon

Place(s) of Operation: Beirut, Lebanon and Miami USA

Budget: \$50, 000 - \$100, 000

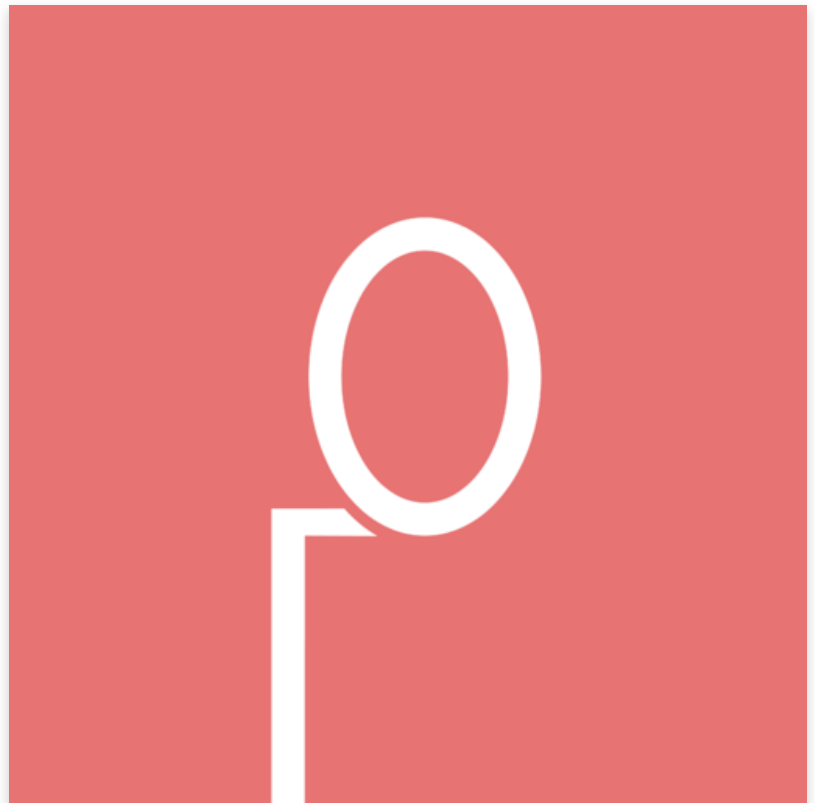
Contact: layaljebran@gmail.com

Find out more at: <http://www.moubarmij.com>

THE IDEA

moubarmij.com is an e-learning platform that provides professional programming tutorials in Arabic.

The platform provides programming courses in form of sequential screencast videos (recording of the computer screen with audio). Each screencast demonstrates a particular skill or knowledge in programming.



THE CHALLENGE

There's no Arabic content on the Internet especially for people in tech. People in the Arab world struggle with English language whenever trying to learn something. We've received many emails from Arab people asking for Arabic content for Programmers.

In order to learn programming, you must learn English first. That's a big problem for a huge number of Arabic speakers planning to learn programming today. Those Arabic programmers of any level, suffer to find quality and up-to-date programming tutorials and content in their native language online.

THE GOAL

Our result is to teach everyone how to code. Nowadays as well there are also specific cases such that of refugees in non english or arabic speaking countries. We hope to achieve as well with organizations helping refugees to code through our platform for free, as we would be able to provide at least a trade for someone to use in a country abroad, a trade that has no language nor geographical barrier and hopefully empower anyone who feels helpless in a strange country, to take action and rise again as a functioning human being in a a society, most importantly to also become self sustainable in that country.

We also have financial goals we wish to reach to be able to remain self sustainable and able to provide the service. We're creating a revenue module where high level programming courses would be paid for (approximately \$4.99/ chapter).



New Life to Plastic

Founder: Carol Maione

Year established: 2016

Place of Establishment: Milan, Italy

Place(s) of Operation: Nairobi, Kenya

Budget: \$25,000 - \$50,000

Contact: carolmaione1992@gmail.com

THE IDEA

The idea is to implement the current waste management system and eradicate the problems that stem from improper waste disposal, raising awareness and sensitization of the population towards environmental issues, focusing especially on low-income and low-educated groups in developing countries. Consideration must be given to innovative collection methods, including those informal areas previously excluded from the service. In particular, we address this issue by introducing a chain of collection points - located in the informal settlements of Kibera, Kenya - daily managed by the women group. These points - referred to as "kiosks" - are receiving sites, where a target population - previously seized on the base of local needs, conformation of local roads and soils, and proximity to housing - is spurred to weekly (according to a timetable early planned) deliver plastic and undifferentiated garbage on payment (KSH/kg). Thereby, the economic benefits entailed will likely motivate people and encourage them to segregate plastic at source, and to recycle it reducing the total amount of waste disposed.

Such plastic amounts, along with those collected by informal waste pickers, are brought to the recycling plant and consequently processed. Smaller-sized pieces are then sold to plastic industries.

THE CHALLENGE

Poor management of solid waste is one of the major problems in Kenya, resulting in destruction of the local environment, due to illegal dumping and consequent runoff of toxic emissions; unhealthy living conditions, due to the outbreak of respiratory infections, waste-carried diseases, and increased child mortality; and lack of environmental education, resulting in improper attitudes such as unaware consumption, increased rates of waste production, and illegal dumping itself. Concerns have risen over the possible risk to human health attributed to the dumping site; but, at the same time, in absence of appropriate knowledge on effects of dumping, lack of policies regulating waste disposal and failure to enhance any existing policies, no effective actions are taking place.

THE GOAL

- i) **Social** - The data from which we project our social impact were observed and collected directly on site by specialists from Social Innovation Teams. In the first phase of implementation, the collection strategy we have proposed will reach the populations currently residing in the pilot community, within a range of 500 meters from the collection stations positioned across the slum;
- ii) **Environmental** - The environmental impacts will mainly be assessed through direct observation and quantification of inputs and outputs. A local manager in collaboration with volunteers on site will measure the tons of plastic respectively collected, segregated and processed in the recycling plant.
- iii) **Economic** - NLtP plans to pay 5 KSH (Kenyan Shilling) per kg of plastic delivered to its plant. It will hire 11 people, one manager and 10 employees, and pay to each employee a salary of 11,000 KSH, equivalent to around 110 USD.

Founder: Borna Scognamiglio

Year established: 2016

Place of Establishment: Paris, France

Place(s) of Operation: France

Budget: \$250, 000 - \$500, 000

Contact: borna@meshup.fr

Find out more at: <http://www.meshup.co>

THE IDEA

Pixis is a web platform for college guidance that helps young students determine their choice of career for their future professional life, guiding them on the path of discovery of the 21st-century jobs. Knowing that 50% of the jobs of the future do not exist yet, it becomes important to understand the factors that will determine the professional framework that will occur in the next 5-15 years.

We are currently designing an innovative «job of the future index», based on three main factors from which we will be able to define the areas and the sectors which will create new jobs and economic wealth:

- a) new skills,
- b) innovation,
- c) Sustainable Development Goals

Our goal is to create an integrated platform, providing several services, of which we mention two:

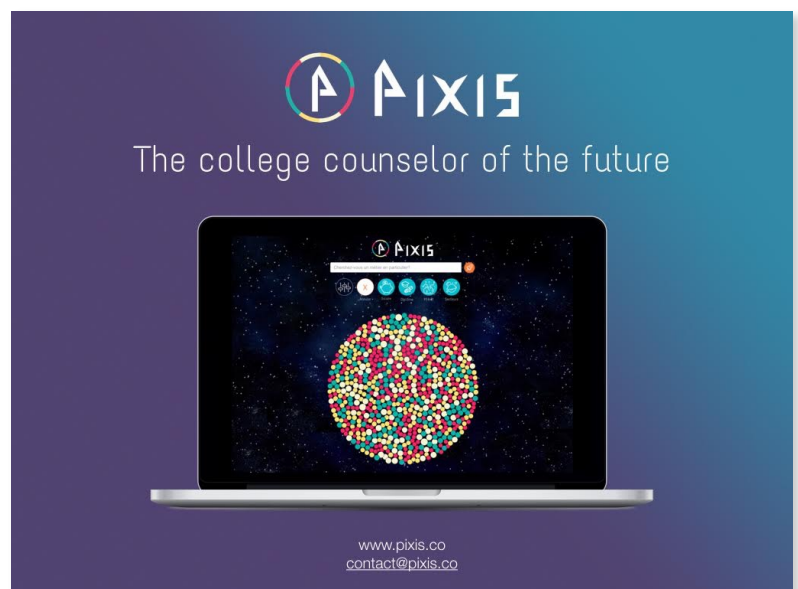
- a) «Galaxy»: Online semantic-algorithm-powered visual search engine, to explore thousands of careers and professional sectors with dynamic filters and enhanced graphical features.
- b) «Pathfinder»: Career forecasting tool that collects online CVs and transforms them into timelines that are analyzed by machine learning algorithms to create combinations of trajectories between a current starting point and a targeted career.

THE CHALLENGE

High-quality, accessible information and education remain a challenge for all countries around the world. Improving the efficiency, quality and equity of education is critical to foster inclusive growth and give everyone a fair opportunity to succeed. Even in OECD countries, we are witnessing today dramatic phenomena of social inequality which impact the education and the employment system. One of the first causes of premature college dropouts (especially in rural or in low-income social and cultural high-tension districts) is the lack or a bad level of information in college guidance.

THE GOAL

The main goal of the project is to leverage achieving higher university degrees by larger number of young students. In line with their values and aspirations, we want to increase their chances of finding future employment opportunities that favour the 17 Sustainable Development Goals of the United Nations 2030 Agenda. More specifically, we want to drastically **reduce the proportion of early college dropouts and decrease the number of those failing to pass the first year of college** (in France, almost 45% of first-year students change their mind at the end of the year; 19% of them quit the education system once and for all).



Providing menstrual products to refugee women, homeless women and women in emergency situations

Organisation: Code Red

Founder: Ileri Jaiyeoba

Year established: 2016

Place of Establishment: Charlotte NC

Place(s) of Operation: Atlanta, GA
New York City, NY
Dallas, TX
Charlotte, NC

Budget: \$5000 - \$25, 000

Contact: ilerijaiyeoba12@gmail.com

Find out more at: <http://www.coderedco.org>

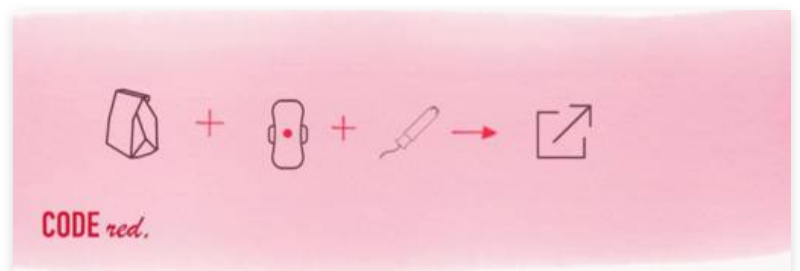
THE IDEA

Our mission is to provide menstrual products to women in need in emergency settings including homeless women and girls nationwide and abroad. We created a nonprofit called Code Red which promotes menstrual hygiene by giving women the comfort they need to get through their daily routines. Each package will come with a card attached will be the information regarding the dangers of human trafficking and AIDS. Code Red promotes proper menstrual hygiene and empower women through comfort and confidence. Code Red facilitates the distribution of packages that help these women manage their menstrual discomfort properly especially when the women are in emergency and vulnerable states. Code Red recruits volunteers to create and facilitate the provision of the care packages while we will ensure that they are distributed to women through appropriate channels.

THE CHALLENGE

In developing countries, **the absence of menstrual hygiene resources leads to an estimated 1 in 10 girls missing school during menses, and this could eventually introduce an even higher dropout rate.** If girls were provided with hygienic menstrual products, they would most likely stay in school and there would not be 65 million girls not in school like there is now.

However, this is not just a “third world countries” issue. Unfortunately the issue of sanitation is also prevalent in our country with thousands lacking access to the basic human right of sanitation. Homeless women in the United States are often in a vulnerable time in their lives and have health problems due to lack of hygiene during menstruation.



THE GOAL

I want the results to be based on how far we reach nationally and internationally and how hard we market our social media, receive donations, and distribute products. How frequently we distribute products and how many products we distribute.

Mobilized Construction



Organisation: Mobilized Construction

Founder: Kevin Lee

Year established: 2016

Place of Establishment: Philadelphia, Pennsylvania, USA

Place(s) of Operation: We operate in Luwero, Uganda and Busia, Kenya.

Budget: \$5000 - \$25, 000

Contact: kevin@mobilizedconstruction.com

Find out more at: <http://mobilizedconstruction.com>

THE IDEA

Mobilized Construction rebuilds dirt roads in rural communities in Kenya and Uganda by employing local individuals and coordinating them in teams to fix roads across rural regions using a shovel and a cellphone. We provide dirt road maintenance and re-graveling at 1/10th of the World Bank construction estimates. We are developing our technology platform to create a scalable solution that can be implemented in any region of the world to create sustainable and resilient roads.

In the broadest sense, every member of the community will positively benefit because everyone uses roads everyday. Better roads lead to more reliable transportation, decreased travel time, and ultimately better access to others. This leads to more affordable access to health

THE CHALLENGE

Roads impact every aspect of life but are often overlooked, classified as expensive, and discarded because public goods are typically government responsibilities. Not surprising this leads to little ownership and limited progress to develop or sustain rural infrastructure investments. Improving rural infrastructure provides access to local and regional services and facilities, specifically market access, healthcare, farming, water, education, and more for all.



Johan talks with Luwero town elders

THE GOAL

For our first project in Uganda, Road to Health, our goal is to increase healthcare access to mothers and children. We will work with Shanti Uganda to track the number of visits to the health clinic.

For our second project in Kenya, Road to Growth, we are focusing to increase farmer's take home income. We are working with One Acre Fund to measure how much farmer's incomes increase. They conduct an annual survey and we will leverage their rigorous evaluation standards to measure the effectiveness of our programs. Moreover, we will be utilizing existing research to determine how much of the income increase can be attributed to better road infrastructure. Research from the World Bank has found that transportation costs often make up 50-75% of the retail price of goods and subsistence farmers who sell surplus crops typically receive less than 20% of the market price. The rest is eaten up by transport and transaction costs. The Belgian Development Agency has also observed a 400% increase in shipped goods, from 22 tons to 100 tons, after dirt road rehabilitation.



Solar Puncture Wala

Organisation: The Batti Ghar Foundation

Founder: Palak Aggarwal

Year established: 2016

Place of Establishment: South Asia

Place(s) of Operation: Nepal, Bangladesh, Kenya, the Philippines

Budget: \$25, 000 - \$50, 000

Contact: palak@battighar.org

Find out more at: <http://www.battighar.org/news.php>

THE IDEA

Solar Puncture Wala is the first of its kind field project where air compressor running on solar energy is deployed in rural areas through a BOP (bottom of pyramid) business model for puncture shops. The innovation intends to compete primarily with manual hand/ pedal operated air pumps and in some cases acts as an alternative to diesel powered and electricity powered air compressors that are available in mostly urban & semi-urban market.

The existing solutions are either too expensive or unreliable in areas with erratic power supply or physically laborious. Decreasing the efficiency & income potential of entrepreneur's and trust worthiness of end-users. Our solar puncture wala kit is innovative, simple & affordable at the same time, making it a suitable device for rural cyclist, motorists & entrepreneurs.

THE CHALLENGE

In past decade there has been a revolutionary progress in infrastructure and technology in developing economies like India. For technology to be able to reach to extremely remote areas there is no enabling ecosystem. There has been increased use of motorized transport for private, public & commercial use in rural areas for fast mobility & economic development. The project 'Solar Puncture Wala' targets a very common problem faced by thousands of cyclists/ motorists on daily basis in remote areas is getting access to basic services like puncture repairs. Traditionally people use manual pumps which require lot of physical labour & the modern ones in market, need constant supply of electricity. Erratic supply or no access to electricity hinders the access to this service in rural areas; thereby harassing the end user.



Project Site:Kalahandi Dist., Odisha



Project Site:Koraput Dist., Odisha



THE GOAL

Availability of Solar puncture wala coupled with the mobile app can reduce down time for these people by providing service anywhere, anytime. As the technology used is solar – it is green and has positive impact on environment. Also it assumes that it will have potential to replace compressors which run on other energy sources saving money as well as reducing carbon footprint of conventional puncture shops.

Along with socio-economic-environment results, we will be able to achieve: (i) increased income for Puncture Wala entrepreneurs; (ii) more customers due to mobile app; (iii) reduced physical labor; (iv) more number of punctures done in a day in less time; (v) air filling in more vehicles in less time; (vi) reduced time to find a nearby puncture shop.



Solar Water Solutions

Founder: Ngoni Mugwisi

Year established: 2015

Place of Establishment: Tempe, Arizona

Place(s) of Operation: Midlands Province, Zimbabwe - with current pilot in Zhombe

Budget: \$5000 - \$25,000

Contact: nmugwisi@usapglobal.org

Find out more at: <http://www.solarwatersolutions.org>

THE IDEA

Solar Water Solutions aims to increase agricultural productivity in Zimbabwean communities and is designed to increase access to water resources in rural Zimbabwe for use in agriculture and consumption. We upgrade existing manual water wells to automated solar boreholes that have powered submersible pumps that extract groundwater with ease. Our approach eliminates the labor required by Zimbabwean smallholder farmers to operate manual bush-pump wells currently in use and enhance their efficiency and capacity using renewable energy.

THE RESULTS

Several partnerships have been formed with organizations such as the 2016 Clinton Global Initiative University, The Resolution Project, Fulton Start Up Center, and Agritex Zimbabwe.

By August 2017, we aim to sign up 100 households to Solar Water Solutions contracts in at least 2 communities in the Midlands Province rural areas, reaching 600 or more Zimbabweans every day. We will assess the daily water-pumping capacity of our upgraded boreholes following our installations and our goal is to double it to up to 15,000 liters per day at its peak. Through their involvement in gardening initiatives as a result of a larger water supply, we anticipate to raise the incomes of participating households from under \$2 per day by an upwards of 60% by 2017.

THE CHALLENGE

We recognize that the developing world is in urgent need of access to basic resources and tools to enable them to emerge out of poverty. The work I intend to do is not new in this generation and does not require groundbreaking inventions. Instead, it demands deliberate intervention, access provisions and delivery of access to tools that we know work to marginal small farmers.

People living in rural communities in developing nations are prevented from engaging in off-season farming (which is their primary source of livelihoods following years of economic instability) due to prevailing water shortages. Current borehole-side farming is heavy manual work and labor intensive.

While the world's poorest are small scale farmers, 70% of the food feeding Africa today is grown by small-scale farmers (mostly women). When this sector fails due to lack of sufficient water, among other inputs, communities suffer. This is particularly serious in Zimbabwe where as many as 90% of Zimbabweans are not formally employed, fending off of subsistence.





Standard Hydro

Organisation: The Resolution Project, Inc.

Founder: Lucien Charland

Year established: 2015

Place of Establishment: Cayon, St. Kitts

Place(s) of Operation: Our main farm is in Cayon and we sell produce in the street market of the capital, Basseterre, and in restaurants across the island.

Budget: \$5000 - \$25,000

Contact: luciencharland@gmail.com

Find out more at: <http://www.standardhydro.org>

THE IDEA

The Standard Hydro model helps farmers access knowledge about crop cultivation through the use of shade houses. By learning to improve yields, diversify and increase their incomes, these farmers are then able to provide affordable food to their communities. Our idea is for a training program to start with a part-time hire who can easily take ownership and manage the daily time commitment (3-4 hours) to cultivate one facility. Our farmers will learn how to operate hydroponic systems and to implement marketing and business strategies. After 4-6 months we will help them secure local financing for a shade house, and connect them to a network of restaurants interested in buying local. We currently operate under a personal business license and have submitted an application for incorporation to the government of St. Kitts-Nevis.



THE CHALLENGE

St Kitt's lack of agricultural activity results in a severe food vulnerability problem because it forces the country to import most of its produce at inflated prices. Moreover, climate variability hinders SKN's ability to grow needed crops. SKN also suffers from structural problems in providing non-tourism jobs; unemployment is almost 20%, while agriculture is only 1.5% of GDP and the sector's growth rate sits at 0%. Further, high cost of living and low wages erode Kittitians' ability to afford basic necessities. This situation leads to widespread hardship, but also presents an opportunity for reimagined local agriculture to overcome regular food shortages and the expensive importation of almost 80% of their produce. To illustrate this dilemma, the cheapest bell peppers, cucumbers, and cabbage in SKN cost approximately \$2.20 USD per pound, more than triple US prices, whereas about half of Kittitians earn \$3.34 or less per hour, making fresh produce unattainable for many.

THE RESULTS

We established several partnerships including a research affiliation with CFB College and several local restaurants. We also trade services with nearby farm hands and have partnered with local farmers to gain land and market their produce. At our site, we catalogue daily inputs, outputs, sales, and nutrients and water usage. We also regularly procure distributors and restaurants' sales reports to gauge purchasing trends. We track the number of farmers that participate in our training program and those that initiate a hydroponic plot.



The Mobile Science Classroom

Founder: Pranali Dalvi & Prachiti Dalvi

Year established: 2012

Place of Establishment: Thane, Maharashtra, India

Place(s) of Operation: Thane, Maharashtra, India

Budget: \$5000 - \$25,000

Contact: prachiti.h.dalvi@gmail.com

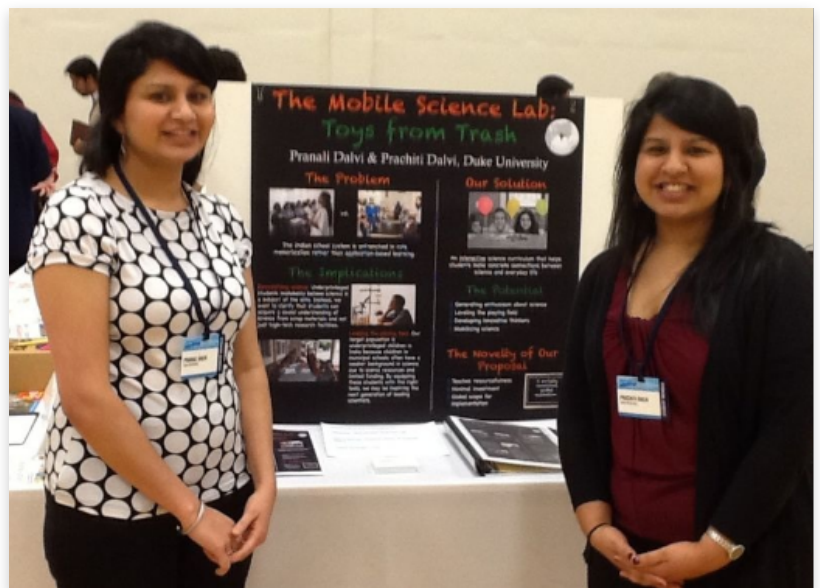
THE IDEA

Through the Mobile Science Classroom, we seek to implement application-based science curricula in grades 5-7 in underserved schools in Thane, Maharashtra, India.

We propose designing and implementing a hands-on, application-based science curriculum that encourages children in underserved schools to draw parallels between science in the classroom and their everyday lives. During after-school sessions with trained volunteers, our students learn to build models, conduct experiments with the pieces of apparatus that they design, and collaborate with their peers to cement their understanding of everything from physics to botany. The experiments we have designed solely use recyclable materials, such as newspapers and plastic water bottles, to encourage awareness about environmental impact and sustainability. Our solution emphasizes the importance of being resourceful and helping students realize that science is completely accessible to them and, therefore, not a subject of “the elite.”

THE CHALLENGE

In India, many underfunded schools still rely on the rote memorization model of learning—a remnant of British rule—rather than application-based learning. In the rote memorization model, students are rewarded for memorizing and regurgitating answers rather than understanding concepts and extending their knowledge to new scenarios. Rote learning is a problem that is especially pronounced in the underfunded schools dotting slums, which often lack the resources necessary to make science exciting to the students in their classrooms. Sadly, the children bear the brunt of a stagnant education system.



THE GOAL

- (i) Reaching 1000 students in grades 5-7 by the end of 2017; (ii) Increasing interest in math and science at higher grade levels;
- (iii) Increasing interest in STEAM careers;
- (iv) Encouraging a shift in teaching style to more hands-on classroom activities rather than rote memorization;
- (v) Increasing critical thinking and analytical aptitude;
- (vi) Endorsing alternative measures of student progress aside from just standardized tests such as assessing students' self-confidence and oral presentation skills.

Too Good to Go

Founder: Klaus B. Pedersen, CMO

Year established: 2015

Place of Establishment: Denmark

Place(s) of Operation: Denmark, Norway, Germany, United Kingdom, France, Switzerland and we have a team in New York City.

Budget: \$250, 000 - \$500, 000

Contact: klaus@toogoodtogo.com

Find out more at: <http://toogoodtogo.dk/>

THE IDEA

Too Good To Go helps restaurants and food businesses reduce food waste through a smartphone app. A buffet restaurant will usually have surplus food left in the buffet before closing time, which they are forced to waste. Instead of wasting the excess food, consumers can come – 15 minutes – before closing time and pick up the surplus food in take away boxes for as little as 2€. This way the food business earns money on what was before lost, the consumer can enjoy a delicious meal for next to nothing and it is a huge benefit for the environment.

We help all sorts of stores like: bakeries, buffet restaurants, sushi restaurants, delis, cafeteria, butchers, and more. We started in Denmark October 2015 and have had success from the start. In January 2016 we launched our app, and in February we launched in Norway. Now we're in England, France, Germany and Switzerland with this concept. We currently have 600.000 users and we have saved more than 260.000 meals from being thrown out. We also have a program where we donate surplus food to homeless people.

THE GOAL

We have been live for almost one year and in less than one year we have:

- Saved more than 260.000 meals from being wasted
- We have earned 517955 EURO to the stores which are a part of Too Good To Go (that was money which was before lost)
- More than 600.000 users across Europe.
- A total of 745 stores in Europe which are a part of Too Good To Go

When we grow and have more resources to sign up stores and develop our systems we will be able to reduce 1000 of tonnes of foodwaste.



Tyrelessly



Organisation: Tyrelessly & TechAPTO

Founder: Anubhav Wadhwa

Year established: 2015

Place of Establishment: New Delhi, India

Place(s) of Operation: Global

Budget: \$5000 - \$25, 000

Contact: contact@tyrelessly.com

Find out more at: <https://tyrelessly.com>

THE IDEA

Tyrelessly is India's first 'Tyres-To-Trees' Company invoking community participation by encouraging responsible motorists to donate their end-of-life tyres for responsible Disposal/Material Recovery/Energy Recovery.

Tyrelessly provides an environmentally compliant End-of-Life Tyre collection and disposal service, providing security, protection and peace of mind for those who feel responsible towards the environment.

We practice a two-fold strategy of Energy Recovery and Material Recovery. As a part of Material Recovery strategy of Tyrelessly, we also segregate and grade End-of-Life Tyres for producing environmentally sustainable products. Our Rubber crumb and buffing products are used in civil construction, synthetic sport fields, landscaping, mats, non-slip pavements, and a raw material for adhesives and resins. We are committed to use specially constructed, oxygen-free reactor vessel, wherein the tyres are heated in high temperatures (reaching as high as 300 to 900 degrees C) to soften the polymer components that eventually become vapours. The vapours are used as flammable gas, as oil or fuel (in condensed form), while the remaining solid form of the tyre is used as a low-grade carbon or char. Tyrelessly recovers 450 litres of fuel, 150 litres of petroleum gas, 75 kg of steel, and 250 kg of carbon from 1,000 kg of tyres.

THE CHALLENGE

The advent of winter in India means tyres, being a popular choice as a heat source become a common sight on roads. One day, early last year, while returning back from a class, I saw a dozen tyres piled on the side of a road; 200 metres passed and the same situation, only difference being that this time someone was also burning them. I saw fumes rising, and could realise that the environmental impact of this could be very disastrous. I could see a problem and even though I had thoroughly planned out the way forward to solve this issue, I wasn't realising that everything is about today, this moment, this second and tomorrow is a different day so waiting shouldn't be an option when the problem is so severe. Seeing someone set a couple of tyres on fire got me thinking and led me to develop Tyrelessly. To avoid this environmental hazard an End-of-life Tyre aggregator working through an efficient platform could be helpful to the environment.

THE GOAL

Tyrelessly has had resounding success in mobilising support from all over the country and from international community. Tyrelessly aims to boost tyre recycling rates in at least 100 communities, grow to one million members and help launch new programs in communities all across India.

Encouraging safe disposal of end of life tyres and promoting material & energy recovery, has to become way of life for it to make a lasting impact in the society and environment alike. It is a long arduous route that requires persistence, patient and grit. Once the model matures, it will be easier to measure the impact.

Chapter 4

BEST PRACTICES IN PROMOTING YOUTH SOLUTIONS





Best practices in promoting youth solutions:

THE VATICAN YOUTH SYMPOSIUM

On October 30-31, 2016, the Pontifical Academy of Sciences (PAS), in collaboration with the Sustainable Development Solutions Network and its Youth Initiative (SDSN Youth), hosted the Vatican Youth Symposium at the Casina Pio IV in Vatican City.

The two-day conference brought together 50 young leaders, from over 30 countries and a variety of disciplines, to co-generate solutions for the achievement of the Sustainable Development Goals (SDGs). The conference included a series of interactive workshops focused on sharing knowledge, generating ideas and operationalizing solutions to the SDGs.

The Vatican Youth Symposium was opened by Professor Jeffrey D. Sachs, Special Advisor to United Nations Secretary-General Ban Ki-moon on the SDGs and the Director of SDSN, and H.E. Msgr. Marcelo Sánchez Sorondo, Chancellor of the Pontifical Academy of Sciences. The Symposium was also attended by his holiness Pope Francis on the first day, who met with all participants.

The Vatican Youth Symposium, which saw 50 delegates from more than 30 countries showcasing their innovative solutions for the achievement of the Sustainable Development Goals, represented a powerful platform where young leaders, critical agents of change, channeled their capacities toward the creation of a better world. SDG solutions discussed and generated at the Vatican Symposium were wide-ranging and multifaceted given the interconnected nature of the 17 SDGs.

The Symposium also had a special focus on solutions for SDG 4: Quality Education and SDG 8: Decent Work and Economic Growth, with additional emphasis on Target 8.7 (to eradicate forced



labor, end modern slavery and human trafficking and secure the prohibition and elimination of the worst forms of child labor).

Following two days of deliberations, workshops and discussions, two SDG-focused solutions were selected by a panel of judges, which was chaired by eminent sustainable development experts. The *LifeCradle* by Malav Sanghavi from India and the *Evaporative Cooling Vest* by Jordan

Imahori from Canada were selected as the winning solutions of the Vatican Youth Symposium.

The two winning solutions, announced by Siamak Sam Loni (Global Coordinator of SDSN Youth) during the Closing Ceremony Dinner of the Vatican Youth Symposium, have been selected, among the 10 finalists, by a panel of judges chaired by leading thinkers and sustainable development experts, including:

- **Bishop Marcelo Sánchez Sorondo**
Chancellor, Pontifical Academy of Sciences
- **Professor Jeffrey Sachs**
Director, UN Sustainable Development Solutions Network & Special Advisor to United Nations Secretary General on the SDGs
- **Dr. Betsee Parker**
Special Advisor to the UN Sustainable Development Solutions Network
- **Dr. Anthony Annett**
Climate Change and Sustainable Development Advisor to the UN Sustainable Development Solutions Network
- **Professor Virgilio Viana**
Chair, UN Sustainable Development Solutions Network | Amazonia
- **Serena Kao**
Chair, UN Sustainable Development Solutions Network | Singapore
- **Dr. Sabina Ratti**
Chair, UN Sustainable Development Solutions Network | Italy
- **Professor Angelo Riccaboni**
Chair, UN Sustainable Development Solutions Network | Mediterranean
- **Katarzyna Dembska**
Researcher, Barilla Center for Food and Nutrition Foundation
- **Siamak Sam Loni**
Global Coordinator, UN Sustainable Development Solutions Network - Youth Initiative
- **Gabriella Marino**
Pontifical Academy of Sciences

These solutions demonstrate that the achievement of the Sustainable Development Goals can be made possible by investing in the creativity and commitment of young people and leveraging on technological solutions to boost the means of implementation. Especially when those young leaders are brought together in one space to share ideas, discuss solutions and cooperate on projects to increase their collective impact.

LifeCradle

Founder: Malav Sanghavi

Contact: lifecradle@gmail.com

Winner
of the Vatican
Youth
Symposium
2016



Malav Sanghavi won first place with his *LifeCradle* initiative; a social enterprise aimed at reducing Infant Mortality rates in under-developed and developing regions such as South Asia, Sub-Saharan Africa and Latin America, which still suffer the absence of neonatal care due to the huge equipment costs and inconsistency of electricity.

Focusing on resolving these problems, **LifeCradle is developing a low cost, cardboard baby incubator, which provides basic facilities (like warmth, clean environment and monitoring) for the child's survival in the first few critical days of its life.** The base, made up of cardboard, is designed to function as a make-shift cot for the child once it

leaves neonatal care, providing it with adequate, hygienic living conditions at home. The lid, which contains all the technology, is reused for the next child.

The initiative addresses Sustainable Development Goal 3 (Ensure healthy lives and promote well-being for all at all ages) and Sustainable Development Goal 9, (Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation). LifeCradle is expected to hit the markets in early 2018!



Evaporative Cooling Vest

Founder: Adam Shiekh (President, aegis)

Contact: adam.sheikh@ouraegis.com

Runner-up of the Vatican Youth Symposium 2016



Jordan Imahori claimed second spot with his solution, *Evaporative Cooling Vest*; an innovative product by Aegis (a nonprofit organization), which aims to reduce heat-related deaths and medical complications in construction industries within countries where severe heat-stress is a workplace hazard.

The cooling vests use the evaporation of water to cool the user and are capable of reducing

the impact of high temperatures on the wearer's health. These vests incorporate the features of traditional high-visibility construction vests and are certified to ISO, ANSI, OEKO, and REACH standards, allowing workers to wear them in lieu of regular safety equipment. In April 2016, Aegis received funding from the University of Toronto to carry out pilot testing of product design in Qatar, which showcased that vests as effective in reducing the dangerous effect of heat on the body.

This solution, which is currently focused on reaching the markets of Gulf Cooperation Council (GCC) member states, addresses Sustainable Development Goal 8 and in particular target 8.8 (protect labor rights and promote safe and secure working environments for all workers, especially migrant worker, particularly women workers, and those in precarious employment).



Best practices in promoting youth solutions:

THE BARILLA CENTER FOR FOOD AND NUTRITION FOUNDATION



Harnessing the power of youth to bring about positive changes in the food system: evidence from the latest edition of the Young Earth Solutions Research Grant Competition

(F. Allievi and K. Dembska)

Introduction

Founded in 2009, the **Barilla Center for Food & Nutrition Foundation** (BCFN Foundation) is a private non-profit apolitical institution. Working as a multidisciplinary and independent think tank, it analyses multifaceted effects that economic, scientific, social and environmental factors have on food. The BCFN Foundation produces valuable scientific content that can be used to inform and help people to make conscious choices every day about food and nutrition, health and sustainability.

The United Nations identified the 17 Sustainable Development Goals, and many of those clearly highlight the central role of food and nutrition to the key development indicators. Six of these SDGs clearly highlight the central role of food and nutrition to many of the key development indicators from health and wellbeing through inequality, sustainability and environmental protection. These include, for example, SDG number 2 ("To end hunger and all forms of malnutrition by 2030"), which will be reached only if affordable and nutritious food will be made accessible to everyone, and if food fortification and vitamin supplementation programs will be implemented towards needy populations. Similarly, in order to reach the goals of SDG number 12 ("To ensure sustainable consumption and production patterns"), actions will need to be put in place to ensure a sustainable use of arable land and to limit the agriculture related pollution and emissions.

Youth will play a fundamental role in creating such necessary changes, however a set of challenges were identified by **FAO** in this regard. First, the insufficient access to knowledge, information and education can hinder the development of entrepreneurial ventures in the agricultural sector. Second and third, limited access to land and inadequate access to financial services also represent crucial obstacles for young people in many countries. Fourth, access to green jobs, which would be a valuable source of more sustainable livelihoods and higher value added, remains a problem. Fifth, limited access to markets effectively impedes youth from being able to engage in viable and sustainable agricultural ventures. The last challenge is the limited involvement in policy dialogue of youth: young people's voices are often not accounted for during the policy process, and so their needs are not met. It will be of utmost importance to address these challenges and increase the involvement of youth in the agricultural sector.

In this context, the BCFN YES! is an opportunity to highlight and support initiatives young researchers around the globe are taking into achieving the sustainable goals, through the implementation of sustainable agriculture, advancing food security and promoting healthy eating patterns, and reducing food waste and losses.

The BCFN Young Earth Solutions! competition

The BCFN Foundation has always played an active role in encouraging and supporting young scientists who carry out research on topics related to our food system. Since 2012, it has decided to launch an annual **Young Earth Solutions competition**. Each year, ten teams of finalists are selected, with each team made of up to three contestants. The multidisciplinary and international character of the teams is one of the selection criteria.

BCFN YES! was born with the aim of providing a voice for young students' bright ideas on themes linked to sustainable food as part of the 4th International Forum on Food, a platform of debate and discussion usually reserved for leading experts from the international scene of food, nutrition and sustainability.

After the success of the first edition in which approximately 3,000 young people participated from across the world, the second edition of Young Earth Solutions gave voice to the best ideas specifically on the theme *"Food and Sustainability: how to reduce our environmental impact, guaranteeing health and access to food to all"*. The third edition of YES! in 2014 aimed to stimulate sustainable development in the agribusiness sector, focusing on the three paradoxes linked to the **Milan Protocol** published by the Foundation: the inequality in food distribution at a worldwide level, the competition between animals, automobiles and humankind for the consumption of agricultural production, and food waste.





In line with the themes of Expo 2015, the fourth edition of BCFN YES! 2015 gathered together the most highly qualified and expert candidates from the world of higher education to look at the greatest problems faced by the global food system, facilitating a multidisciplinary and international approach. All participants in the competition were involved in the Youth Manifesto initiative, a charter which forcefully calls on world leaders to deal with the great challenges facing the planet: famine, obesity, food waste and exploitation of the Earth.

Since the first edition, the contest has gone a long way and the 2016 edition reached an even higher qualitative level: the 2016 call was open to PhD and post-doc level researchers, younger than 35 years old and from any educational background. The first prize was a one-year research grant for the amount of 20 000 €. More than one hundred applicants from forty different countries submitted the most varied research proposals. A jury of international experts has selected the **ten finalists teams**, based on the robustness, organization and practicality of the projects. The ten teams were invited to present their research proposal at the 7th International Forum on Food and Nutrition at Bocconi University, in Milan, on November 30th. After being presented by the BCFN Alumni, each finalist team had the opportunity to present the highlights of the research, and answer to the Jury's questions. All proposals have distinguished themselves for competence, soundness and inspiration, and they are all deserving of special recognition. In the following pages, the abstracts of the finalist projects of the 2016 edition are gathered.

All the finalists of each edition of the YES competition become members of the BCFN Alumni Association: a global network committed to sharing experiences and developing an even stronger impact on changing the food system. Further information concerning the YES competition and the finalist projects can be requested from alumni@barillacfn.com.

WINNING PROJECT & FINALISTS

WINNER: *Surviving the drought: an irrigation curriculum for Jamaica's small-scale farmers.*

Anne-Teresa Birthwright and Shaneica Lester - Jamaica

The projected impacts of climate change are already being experienced. The farmers in one of Jamaica's principal agricultural zones have always had to adjust their practices to contend with dry conditions. This project will be an adaptive participatory approach in which farmers in the parish of St. Elizabeth benefit from a Knowledge Transfer Curriculum (KTC). This educational design with a summative evaluation will be used to enhance the knowledge capacity of farmers through adaptive irrigation strategies. Simultaneously pre-selected plots will be classified using a Normalized Difference Vegetation Index (NDVI) to determine changes in the relative amount of green biomass overtime. These enhancements in irrigation strategies may reduce drought vulnerability by applying practical means of coping with rainfall dependency and water stress. Adaptation at the local level through education, improved irrigation methods and social capital, may improve farming livelihoods and maximize yields.



IMAGE CREDIT: BCFN YES!

Achieving food security in a changing climate: investigating the potential of using fast agro-produce hybrid solar drying technology in Uganda.

Mohammed Ssemwanga – Uganda

In Uganda, food insecurity is a result of persistently low productivity and high postharvest losses (PHL). With over 85% of Ugandans fully dependent on rainfed agriculture, farmers solely rely on traditional Open Sun Drying (OSD) for drying produce. Unfortunately, the customary OSD demands more time and space, and is labor intensive. The quality of dried produce is also compromised by contamination from dust and moisture. Consequently, PHL are increasing from 5-15% in cereals and legumes, 20-25% in root tubers, and over 35% in fruits and vegetables. Therefore, a Fast Agro-produce Hybrid Solar Dryer (FAHSD) is made to efficiently dry produce using renewable solar energy. FAHSD technology uses novel hybrid combination of direct and indirect heat transfer mechanisms to dry food. Here, even the perishable fruits and vegetables, usually wasted due to oversupply at peak harvest will be dried. Henceforth farmers will 'add value' and prolong shelf life of any produce for use during shortages.

Achieving food sovereignty with edible insects: breaking the cycle of poverty and malnutrition.

*Darja Dobermann – Germany
and Charlotte Payne – United Kingdom*

The global agri-food system is jeopardized by an intergenerational sequence of poverty, food insecurity and environmental degradation. Our project tackles multiple aspects of this cycle simultaneously. We will improve nutrition using Cirina butyrospermi, an iron- and protein rich traditional food in West Africa, while also developing access to a consistent local supply. We will pilot a complementary feeding programme using fortified maternal and infant food, and we will develop and pilot a year-round C. butyrospermi rearing method for smallholder farmers. C. butyrospermi is nutritionally and culturally appropriate. It has a short lifespan with a high feed conversion ratio, ideal for smallholder rearing. Our project will be based in Burkina Faso, where we have consulted with stakeholders and conducted preliminary research. Our project has the potential to significantly impact poverty-driven food insecurity in this region, and to generate results with widespread application.

Agricultural production in recovered areas after coal mining in Brazil: the boundaries between risk and food security.

Diana Marcela Morales Londoño – Colombia

Emanuela Pille de Silva – Brazil

and Anabel Gonzalez Hernandez - Cuba

In Southern Brazil, coal mining has caused great pressure on land use, leading to soil and water contamination with heavy metals. For these reasons, the coal industry and the Brazilian government were forced to implement measures to recover the affected areas, given that those elements are bio-cumulative and affect human health. Agriculture is one of the potential uses for recovered lands. In fact, some recovered areas are currently cultivated. However, there is uncertainty about the risks of heavy metal contamination in the food currently produced. Therefore, our aim is to evaluate how suitable the recovered areas are for the production of safe food, and how risky is that food to human health. We will characterize the current land use, the consumption and disposal of food produced, and quantify the heavy metal contents in the crops. We expect public health policies in the region to include monitoring of food contamination with heavy metals, which has not been done elsewhere in Brazil.

Bio-cultural diversity bringing joy back to the table: recovery of food traditions in Los Altos de Chiapas, México and Shillong, Meghalaya, North East India.

Costanza Monterrubio Solis - Mexico

Women are providers for 80% of the households struggling for food security in the world. This research explores: How can the recovery of food traditions help to enhance native seed conservation, food security and healthy diets in bio-culturally diverse regions? A comparative study is proposed in Los Altos de Chiapas, Mexico and in Shillong, Meghalaya, India to achieve the following objectives: 1) To identify local elements of food traditions keeping agro-biodiversity and nutrition; 2) To analyze the relationship between self-consumption and cash crops at the household level; 3) To document local strategies for food security; 4) To develop a recipe book and workshop with young people and women to prepare traditional food while we reflect on the importance of native crops for their health and community. Results will provide data about the role of women as consumers, producers, and key players for food security and healthy diets, conservation of food traditions and bio-cultural heritage.

Change your mind before you choose! Brain signature of changing food information on healthiness and sustainability to improve food choice.

Pin Jane Chen – Taiwan

We investigate how concepts of healthiness/sustainability guide food choice and whether the choice can be modified. With Electroencephalography, we examine the neural mechanism of induced food-choice changes to provide deeper understanding of how to improve eating behavior. Participants' electroencephalography will be recorded while they undergo semantic congruency task, followed by behavioral implicit/explicit measures and a behavioral-choice task, before and after an evaluative-conditioning intervention. The intervention aims at modifying the link between concepts of healthiness/sustainability and food-items. We target neural markers that tracks the conflict between food-items and food-related information. The change in behavioral-choice after the intervention should be the result of changes in the targeted neural signatures. Samples from Italy and Taiwan will be included to compare the role of cultural context against a more general neural underpinning in food choices.

Good for bees, good for humanity.

*Niccolo' Calandri
and Riccardo Balzaretto - Italy*

Human life – and the world as a whole – would be much different if bees did not exist. Bees are responsible for the pollination of 400 different agricultural types of crops. Moreover, honeybees

contribute to produce approximately a third of what we usually eat. In the last year more than 53% of bees have died in Europe and about 90% in US. We are proposing a research project directly focused on helping of bees: studying bee lives and the causes of their disappearance, we will be able to predict their death due to pathogens/chemicals. 3Bee project's aim is to design an innovative electronic monitoring system for beehive that shares information among everyone who wants to help bees: researchers, beekeepers and consumers as well. This system analyses parameters like air quality and sound spectrum. It is completely self-sustainable (solar energy and bee vibrations) allowing people to help bees just buying the bee products from the monitored beehives, contributing to install of new systems.

Climate change and cashew (anacardium occidentale L.) Productivity in Benin (West Africa): measures and adaptation strategies.

Bello Daouda – Benin

Despite the importance of cashew for millions of people and households in Africa and Benin in particular, and despite an increase in cashew production, the sector is vulnerable to climatic variability. The study of the impacts of climate change on the cashew tree is not yet done in Benin. This study aims ultimately to develop an adaptation strategies to reduce the impact of climate change on cashew in Benin.

Mu-sic (mucuna pruriens-safety intercontinental). A legume that unites continents: efficacy and safety of food that can treat a neurological disease.

Benedetta Raspini – Italy

Parkinson's disease (PD) is a neurodegenerative disorder that occurs mainly in the elderly worldwide. The gold standard treatment for PD is the drug therapy with Levodopa which is too expensive for people living in low income countries. Mucuna Pruriens (MP) is a legume with high concentration of levodopa and it grows spontaneously in tropical areas of Africa, Asia, South America. MP for its natural property it's a perfect candidate to become a nutraceutical low-cost product for PD treatment. The main goal of the project is to offer an effective and alternative therapeutic option for patients living in developing countries which would be sustainable from both an economic and environmental point of view. We will focus on encourage the cultivation of MP in selected areas, disseminate the information about how to use the product correctly and set up a nutritional program to improve MP bioavailability and PD nutritional secondary symptoms (e.g malnutrition, dysphagia and constipation

SHIFFT: supporting holistic "innovation" and the diffusion of innovation: scaling up agroecological system development.

Chris Maughan – United Kingdom

Agroecology (AE) is being taken up by scientists, civil society and governments as one of the important development pathways to improve the sustainability and equity of agri-food systems. Many of the most promising AE innovations are invisible or marginalized by mainstream policies and funders. The dominant thinking and policy around what constitutes desirable innovation, research and policy largely reflect a now defunct productivist model of development. This narrow paradigm undermines the wider range of economic, social, and political innovations that must be better understood and supported. This international research project will interrogate the meanings and the processes of innovation in agriculture and focuses on the ways that grassroots AE innovations can be better scaled up. We will analyse grassroots innovation in France, the UK and Spain. The project will also focus on how grassroots AE innovation processes can be diffused and how this can be supported by policy research.

SUPPORTING THE YOUTH SOLUTIONS REPORT

There are multiple ways in which you can support SDSN Youth and its partners achieve their objectives and help them showcase the Youth Solutions Report, its future editions and the dissemination and exploitation activities it comprises.

- Donating to support the offline and online activities of SDSN Youth promoting youth-led solutions
- Partnering with SDSN Youth to increase the reach of the report through joint exploitation activities
- Providing media coverage to the solutions contained thereby, if you represent a media company, website, or blog
- Supporting some of the youth-led solutions we are promoting (i.e. financially, through managerial capital or visibility) or investing in them
- Hosting a presentation of the Report or organizing joint conferences/events focused on youth-led solutions with SDSN Youth focused on youth-led solutions
- Providing institutional support through your organization and promoting the Report online.
- If you have access to youth-led solutions through your work and/or your networks, encouraging their founders to submit them through our website to participate in future editions of the report.

To learn more, contact the Solutions Report team at [**solutions@sdsnyouth.org**](mailto:solutions@sdsnyouth.org)



ABOUT SDSN YOUTH

In 2012, the UN Secretary-General Ban Ki-moon launched the **UN Sustainable Development Solutions Network (SDSN)** to mobilise global scientific and technological expertise to promote practical problem solving for sustainable development, including the design and implementation of the Sustainable Development Goals at local, national and global scales. In 2015, the SDSN launched SDSN Youth as its official youth initiative to empower youth globally to create sustainable development solutions.

SDSN Youth educates young people about the challenges of sustainable development and creates opportunities for them to use their creativity and knowledge to pioneer innovative solutions for the SDGs. In addition, SDSN Youth creates platforms for young people to connect, collaborate and integrate their ideas and perspectives into national and regional pathways for implementation of the SDGs.

Since its launch in June 2015, SDSN Youth has:

- **Built a global team of 51 staff working in 21 different countries** - including students from Harvard, Oxford, LSE, Monash and Columbia and young professionals working in international development, sustainability and environmental consulting, among others.
- **Increased its membership to 120+ organisations** from more than 35 different countries.
- Launched several global initiatives, including the **Vatican Youth Symposium, Twenty Thirty, Global Schools** and **Local Pathways**, which empower young people in creating solutions for sustainable development.
- **Represented the network on 100+ committees, working groups and panels.**
Including:
 - UN Working Group on Youth and Peacebuilding
 - UN Policy and Strategy Group
 - Global Partnership on Sustainable Development Data
 - World Urban Campaign
 - UN Major Group on Children and Youth
 - ICYMO 2016 Taskforce
- **Given 200+** presentations and speeches
- **Published 150+** reports, articles and blogs.
- **Formed partnerships with important organisations and individuals**, including:
 - Vatican Pontifical Academy of Sciences (PAS)
 - Project Everyone
 - UN Secretary General's Envoy on Youth
 - AIESEC International
 - German Development Agency (GIZ)
 - Mandela Foundation
 - United Nations Academic Impact (UNAI)
 - Ashoka International
 - UN Foundation
- Supported and contributed to global projects, including the **SDG Index, Deep Decarbonisation Pathways Project** and the **World Happiness Report**, amongst others.
- Organised the **#KnowYourGoals** campaign and developed educational materials to promote local discussions of the SDGs. The campaign concluded with approximately 120 events across 44 countries, with more than 15,000 individuals being directly involved.

SDSN YOUTH NETWORKS

SDSN Amazonia

(Manaus, Brazil)

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SDSN Caribbean

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SDSN Andes

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SDSN Great Lakes

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SDSN Turkey

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